DOCUMENT RESUME

ED 130 220 CS 002 640

AUTHOR Causey, Oscar S., Ed.
TITLE What the Colleges Are Doing in Planning and Improving College Reading Programs; Selections from the First, Second and Third Yearbooks of the Southwest Reading Conference for Colleges and Universities.
PUB DATE Jun 55
NOTE 167p.; National Reading Conference was formerly known as the Southwest Reading Conference; Published by Texas Christian University Press ; For related documents, see ED 123 568-572, CS 002 649, 650, and 652; Best copy available

EDRS PRICE MF-$0.83 HC-$8.69 Plus Postage.
DESCRIPTORS Adult Reading Programs; *College Students; Counseling Services; Higher Education; Program Administration; *Reading Improvement; Reading Instruction; *Reading Programs; Reading Research; Remedial Reading
IDENTIFIERS *National Reading Conference; *Southwest Reading Conference Colleges Universities

ABSTRACT

This volume contains selections from the first, second, and third yearbooks of the Southwest Reading Conference for Colleges and Universities. Articles discuss various aspects of college reading programs, including program establishment and administration, recent research on college reading, student reaction, vocabulary development, evaluation of reading films, an evaluation of the tachistoscope, emotional problems in reading, counseling in relation to the program, programs for adults, and grouping in remedial reading. (JM)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED130220

WHAT THE COLLEGES ARE DOING
in
PLANNING AND IMPROVING COLLEGE READING PROGRAMS

Selections From the First,
Second and Third Yearbooks
of
The Southwest Reading Conference
for
Colleges and Universities

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

Edited by
Oscar S. Causey

BEST COPY AVAILABLE

Published by
Texas Christian University Press
Fort Worth, Texas
June, 1955

CS 002 640

FOREWORD

Most of the work of the Southwest Reading Conference consists of the activities of the annual meeting and the publication of the Yearbook.

All of the papers presented at the annual meeting are contained in the Yearbook. Additional articles of interest written by members are also included.

One of the purposes of the organization is realized in the presentation and evaluation of topics relating to reading methods, techniques, procedures and materials used in increasing proficiency in interpreting the printed page. Emphasis is placed upon experimentation and research.

The success realized by the Conference is due almost entirely to the interest, contributions and excellent professional attitudes of members participating in the work of the conference.

This volume contains articles published in the first three Yearbooks.

Oscar S. Causey

WHAT THE COLLEGES ARE DOING IN PLANNING AND IMPROVING COLLEGE READING PROGRAMS

Copyright, 1955 by
Texas Christian University Press
Fort Worth, Texas

"PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY
Texas Christian University Press
TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE NATIONAL INSTITUTE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER."

All rights reserved. This book, or parts thereof, may not be reproduced in any form without permission of the publishers.

EXECUTIVE COMMITTEE

Albert J. Kingston, Texas A. and M. College
William Eller, State University of Iowa
Roy Sommerfeld, Oklahoma A. and M. College
David McAllister, Arkansas Polytechnic College
Ralph Staiger, Mississippi Southern College
Oscar S. Causey, Chairman, Texas Christian University

CONTENTS

PART I

Page

THE READING PROGRAM IN THE COLLEGE CURRICULUM 1
Dr. William Eller, University of Oklahoma

PROBLEMS IN THE ADMINISTRATION OF A COLLEGE READING PROGRAM 6
Albert J. Kingston, Jr., Texas A & M College

A DEVELOPMENTAL READING PROGRAM FOR COLLEGE STUDENTS 13
Oscar S. Causey, Texas Christian University

A SUMMARY OF THE CONFERENCE 16
Rudolph Fiehler, Southern State College

PART II

RECENT RESEARCH IN READING ON THE COLLEGE LEVEL 19
Dr. Emery P. Bliesmer, University of Texas

ASSESSING STUDENT REACTION TO A COLLEGE DEVELOPMENTAL READING PROGRAM 36
Dr. A. J. Kingston, Jr., Texas A & M College

VOCABULARY DEVELOPMENT IN COLLEGE READING PROGRAMS 42
Miss Loris DeFigh, University of Tulsa

TYPES OF READING PROGRAMS 50
Dr. William Eller, University of Oklahoma

SOME PROCEDURES IN DEVELOPMENTAL READING IN COLLEGE 53
Oscar S. Causey, Texas Christian University

EVALUATION OF READING FILMS 60
Dr. William Eller, University of Oklahoma

DEVELOPMENTAL READING COURSE AT CONVAIR 64
Mr. R. A. Wagner, Publicity Committee, Convair

PART III

Page

READING--AN INNOVATION IN THE COLLEGE CURRICULUM 67
Ralph C. Staiger, Mississippi Southern College

AN EVALUATION OF THE TACHISTOSCOPE IN READING IMPROVEMENT PROGRAMS 74
Roy E. Sommerfeld, Oklahoma A & M College

RECENT RESEARCH RELATIVE TO COLLEGE READING 93
Emery P. Bliesmer, University of Texas

EMOTIONAL PROBLEMS IN READING 112
Elsie Dotson, University of Texas

INFORMAL METHODS OF APPRAISAL 118
A. E. Denton, Texas A & M College

ANALYSIS OF READING QUESTIONNAIRE 124
Albert J. Kingston, Texas A & M College

READING IMPROVEMENT IN INDUSTRY 128
D. D. Hunt, Humble Oil Co., Houston, Texas

SOME FACTORS IN THE READING BACKGROUND OF COLLEGE STUDENTS 133
Oscar S. Causey, Texas Christian University

COUNSELING IN RELATION TO THE READING PROGRAM 137
Tandy W. McElwee, Louisiana State University

COUNSELING AND THE READING PROGRAM 141
Albert J. Kingston, Texas A & M College

READING PROGRAMS FOR ADULTS 144
A. J. Pellettieri, University of Houston

WORD ATTACK AND VOCABULARY DEVELOPMENT 148
Mrs. Hazel Horn Carroll (Mrs. Timothy)
Southern Methodist University

Page

GROUPING IN REMEDIAL READING 153
Elsie Dotson, University of Texas

THE SOUTHWEST READING CONFERENCE, 1951-1953 157
Miss Lucile Willowby, University of Oklahoma

PART I

FIRST YEARBOOK 1952

THE READING PROGRAM IN THE COLLEGE CURRICULUM

Dr. William Eller

University of Oklahoma

The reading habits of most adults in this country could be markedly improved through a program of specific training in speed and comprehension skills requiring only a few weeks of guided practice. For young adults in college, such improvement in reading ability can effect significant improvement in academic performance. College professors, when asked the reasons for failures among their students usually include "poor reading and study habits" in their lists. In recognition of this cause of academic deficiency, many colleges have provided some sort of instruction in reading techniques for students of poor reading ability. Most of these college reading programs have been incorporated into the total college programs in the past decade. The attendance at this conference indicates that college officials throughout the Southwest recognize the significance of the reading problem among college and university students, even though some conference visitors are representing institutions which as yet have not planned an attack on the problem.

The widespread interest in college reading instruction stems not only from the realization of the importance of adequate reading ability in college academics, but from an awareness of the very gratifying results achieved by the current methods of teaching reading to adults. In the literature, reading speed has been accorded considerably more attention than has reading comprehension, although, of course, reading without comprehension is not really reading. The greater attention has been devoted to speed because the typical college student in a training program will increase his rate of reading about 100%, whereas his comprehension increase during the same period may be only 10% or 15%, as measured by one of the widely-used standardized tests.

During the first eight weeks of the second semester, 1951-52, 140 students were enrolled in the reading improvement course at the University of Oklahoma. During this eight weeks session, the average increase in reading speed was 88%; the average increase in comprehension was 46%. Both percentages are based on results of two forms of the Iowa Silent Reading Tests, one form given at the beginning of the program and the alternate form at the termination. The comprehension gain is probably at least partly spurious, since a student who has performed on one form of the Iowa Silent is at an advantage when an alternate form is administered.

During this same eight weeks period, L. D. Gilmore, a clinician in the reading laboratory at the University of Oklahoma, conducted an experiment which compared improvements in reading skills made by enrolees in the college reading program with changes in reading abilities of a similar group of students who were not given formal reading instruction. Mr. Gilmore's subjects were freshman students in the Army ROTC program at Oklahoma. Two sections of these students, 42 cases, were given the eight weeks of reading training which is standard at that institution; two other ROTC sections (33 cases) were given no reading instruction. All four sections were tested with the Iowa Silent Reading Test at the beginning of the eight weeks session, and again at the end with an alternate form of the test. During the training period, the average reading speed of the men in the two experimental sections increased from 267 words per minute to 404 words per minute. The average speed among the controls changed during that time from 269 to 273 words per minute. The improvement among the experimentals was statistically significant at the .1% level of confidence; the change among the controls was attributable to chance. The experimental sections demonstrated a moderate increase in comprehension, significant at the 10% level of confidence; the control groups showed no gains in comprehension.

Most college reading instructors who have been attacking students' reading problems for any considerable period have devoted some effort to the improvement of comprehension skills, and have experienced some success. However, since comprehension is not increased much for the average student, it should be pointed out that the marked improvement in rate of reading alone would be sufficient justification for college reading instruction, as long as such progress can be effected without loss in comprehension. The volume of reading which confronts the college student is great enough that if he can be helped to reduce his reading time by half, he should have quite a bit more time for other academic chores. One of the pioneers in the field of college reading, Dr. J. B. Stroud of the University of Iowa, used to say in jest, "If I can take a student who reads a certain number of pages an hour without understanding, and can get him to "not understand" that much printed matter in a half hour, I maintain that I've helped him."

Perhaps the need for rapid reading is most apparent when faster reading rates are considered as an asset in critical reading and thinking. Social scientists are concerned about the critical reading abilities not only of college students, but of the entire adult population. One requisite for critical reading is a good background of information, and one of the best ways to acquire a background is through wide reading. If a student can double his rate of reading, he can double his opportunities to enrich his background. By way of illustration, consider a student who wishes to find out about Socialism in England. He may begin his study by reading a book, but if he knows very little about England's socialistic programs, he can't read the book very critically. After he has read half a dozen books representing different points of view, he can read much more intelligently on the subject. In dealing with any subject the more information a reader possesses when he begins to read, the more critically he can read; and, the more rapidly he can read, the more he can build up his informational background in a given period of time.

Here in the Southwest, there is a particular need for reading training for college students, since our students are on the average, somewhat inferior to the average of college students throughout the country, in the matter of reading ability. Recently, Ernest A. Jones, director of the reading program at Northeastern State College, Tahlequah, Oklahoma, surveyed the reading abilities of freshmen entering several of Oklahoma's institutions of higher education. His research indicated that 63% of the freshmen entering the University of Oklahoma in the past five years have fallen below the national median on the reading section of the Ohio State Psychological Examination. Even less reassuring was the disclosure that 78% of the freshmen entering Oklahoma A & M College fell below the median score on the reading test employed at that institution. While Jones did not collect data from any Southwestern states other than Oklahoma, it is probable that many colleges in this region would provide similar data if the experiment were repeated.

The foregoing paragraphs have dealt with the necessity for reading instruction in colleges, and the satisfying results usually obtained when such instruction is offered. Some attention must be devoted to the actual incorporation of the reading program into the college curriculum.

Most college reading programs now in existence are supervised locally by (1) the English or communications skills department, (2) the psychology-guidance department or (3) the education department. There are, as would be expected, advantages and disadvantages in each of the three arrangements. Certain personnel of the education department usually are best informed about the teaching of reading, but in some instances they have failed to realize that adult reading instruction should be different from the teaching of elementary reading in a great many respects. In colleges which have a communications skills program, the instructors of that department may well be the logical supervisors of the reading program, and the task certainly belongs in their domain. An arrangement which provides for joint management by the education and communications skills staffs has the advantages of both the methodological know-how and a wise perspective of the place of the reading instruction in the total skills program.

At present, only a few colleges and universities have reading programs which local administrators consider entirely adequate. It is common practice to administer a reading test to entering freshmen, to locate the poorest readers, and then to provide instruction to these low-scoring members of the group. While the philosophy of this approach seems reasonable, it fails to recognize the fact that many of the good readers in the freshman class -- or in any of the classes -- would improve their reading skills tremendously if instruction were provided, and it can be argued that it is just as important to help the good reader to become an outstanding reader as it is to help the poor reader to become an average reader.

Some colleges charge an extra fee for enrollment in the reading improvement course. Since special equipment and materials are usually used in the training, it seems appropriate that a nominal fee be charged, if desired, as it so often is in connection with laboratory science courses. A small fee might even discourage students who are not genuinely interested. But because the development of reading skill may mean the difference between success and failure for some students, the fee should not be excessive to the point that some poor readers couldn't afford the instruction.

Doubtless, there are many satisfactory arrangements for supervising reading programs in various local situations. The important aim right now is to make this training available to all students who can profit from it, so that they no longer need stumble along without a respectable command of this indispensable tool for learning.

PROBLEMS IN THE ADMINISTRATION
OF A COLLEGE READING PROGRAM

Albert J. Kingston, Jr.
Texas Agricultural and Mechanical College

Many difficulties beset the remedial specialist who is charged with the responsibility of organizing and administering a college reading program. Many of these problems grow out of the unusual role played by a reading program in the college community. Reading programs are comparatively recent innovations and many of the difficulties which arise are due to this condition. In this discussion an attempt has been made to touch upon many of these factors. It must be realized from the onset that some of the difficulties which are discussed will not be encountered in all institutions, and that many specific problems will arise in any one institution which are not common to other institutions. It must also be recognized that this discussion does not presume to encompass all of the problems which must be faced by the remedialist.

Analysis of the problems faced by the reading specialist probably may best be made by categorizing the difficulties into two areas: those which concern the integration of the program into the existing structure of the college or university, and those problems which arise in connection with the organization and operation of the reading program itself. It must be recognized, however, that areas are not dicotomies, but merely are convenient frames of reference employed for the purpose of clearer analysis.

In attacking the problems which arise in connection with the administration of a college reading program, it might be wise first to consider the implications of such a program upon the institution which sponsors it. Basically, the inauguration of a reading program connotes an admission that the institution seeks to apply an educational philosophy which dedicates itself to assisting the student in so far as possible in making an adequate adjustment to college study. Herein lies the first problem which faces the reading specialist. On the campus of every college, one can find many professional men who do not believe that the college should concern itself with students who lack adequate preparation or who fail to make normal adjustments. This group of academicians feel that the establishment of a reading improvement program is an overt admission of lowered academic standards and "watered course work". This conflict in philosophy becomes more apparent if course credit is proposed for student participation in the reading program. All who are engaged in the field of reading have heard exclamations of disgust and disparaging statements from faculty members who believe that an institution of higher learning should not waste its time with a student who failed to develop adequate reading skills prior to enrollment. The director of a reading program must "sell" his program to this group of the faculty. The selling cannot be done through slick, super-sales techniques, but can be done through discussions and meetings conducted in a professional manner. After a period of time, the reading specialist should be able to demonstrate to this group the value of his services by use of follow-up studies and other research methods. Another technique which has considerable value is to invite groups of the faculty to enroll in the program so that they might gain first-hand knowledge of the methods employed and the results obtained. Most of the group who participate will become strong supporters of the program. The specialist will also have additional ammunition to utilize if he has some knowledge of the large number of accredited and highly regarded institutions which have established reading programs. He should also draw attention to the reports concerning industrial and armed forces reading programs.

Other problems develop at the opposite end of the scale. Many faculty members will welcome the establishment of a reading program and will regard it as a panacea for all of the difficulties encountered by students. The reading specialist must caution this group and carefully explain the limitations of his program. He must take pains to prevent his program from becoming the refuge of students who have all sorts of maladjustments. Many students will be referred who do not have true reading disabilities but rather have inadequate scholastic aptitude, foreign language handicaps, and social-emotional maladjustments. Although some students may have problems related to reading, such as ineffective study habits and poor spelling and writing achievements, they may best be aided by other student personnel services.

The reading specialist faces other difficulties which grow out of his subordinate position in the college hierarchy. He must secure the whole-hearted cooperation of his superior if his efforts are to be fruitful. Many college administrators tend to regard a reading program in the same light as they would another academic program. The problem becomes intensified if the reading program carries credit. Often college policies and regulations hamper the specialist in individualizing his program to the extent he desires. Other difficulties arise regarding grading systems, delimiting class size, and per-pupil training cost. Sometimes administrators fail to recognize that mechanical aids, motion picture films, standardized reading tests, and test answer sheets are expensive. Some administrators tend to compare reading program expenses with the instructional costs of such related subjects as English, Education, or foreign languages. Similarly, some administrators tend to calculate the reading specialist's work load by employing the same criteria utilized to evaluate the load of an academic teacher. These administrators fail to recognize that the director of a reading program must spend considerable time in individual work conferences devoted to the diagnosis of a student's difficulties and to the planning and supervising of the pupil's program. In many college reading programs, maximum student gains are not being realized because the specialist lacks sufficient time to supervise the progress of students as closely as desired. The reading specialist must familiarize his superior with his work problems if he is to avoid these pitfalls. Despite the contrary opinion held by some college instructors, most college and university administrators are usually willing to listen to reason.

In passing, it might be well to mention another area which sometimes creates difficulties. This prolem involves the question of which department or service should sponsor and operate the reading program. The development of many programs are aborted because the sponsoring group fails to enlist the support and cooperation of all the departments of the institutio

Effective reading programs have been developed under the aegis of departments of Education, English, and Psychology in addition to various student personnel services. The sponsorship of the reading program should be determined by studying local conditions and the final decision should be based upon the discovery of the most effective location. The establishment of the program itself should be a joint enterprise.

Considerable discussion has been devoted to the difficulties entailed in the establishment and acceptance of the reading program within the total framework of the institution. After these difficulties have been eliminated, the remedialist must face certain problems in the organization and administration of the program itself. He must study many factors before he launches his program. A sound approach is to analyze the needs of the student population, and to design his course to satisfy these needs. He must decide which skills need emphasis and determine the amount of time which should be devoted to such phases as vocabulary development, word attack, word recognition, span of recognition training, etc. He must decide whether to employ an individualized clinical approach or to establish a group program with emphasis upon developmental reading. If his situation is typical, he will find that both approaches are needed.

As most colleges and universities have developed group programs in reading improvement, it might prove beneficial to analyze some of the difficulties which arise from this method. In the development of group programs, the specialist usually employs one of two approaches. He may utilize a "shot-gun" approach which consists of touching briefly upon many subskills or he may channel his program so that only four or five skills are emphasized. In employing either approach the specialist must make provisions for individuals whose needs are not being satisfied. His program must be flexible enough to provide for individualized training and diagnosis.

One of the most controversial questions which faces the specialist who develops a group program is whether or not course credit should be granted for student participation. Many valid arguments have been proffered to support both sides of this question. As previously mentioned, many professional men feel that credit lowers academic standards. Others fear that the reading course is in danger of becoming a haven for the student "shopper".

Still others believe that if credit is given for developing adequate reading skills, credit should also be given to students who make educational, vocational, or personal adjustments with the assistance of other counseling services. Those who favor giving credit argue that many students who need the training will not seek it as readily as they should if credit is not offered. Many reading specialists feel that it is difficult to hold students as long as they desire if no credit is allowed. Reading programs which do not carry credit often do loso as many as fifty percent of their students prior to the completion of training. Again the specialist must analyze the local situation to determine whether a more effective program can be developed if credit is offered.

If credit is offered for the reading program, certain difficulties arise in the determination of grading standards. Two methods of grading are common. One plan requires that each student be evaluated in terms of his individual progress and achievement. An alternate method is to grade students in terms of standards or norms which have been determined more or less arbitrarily. Although the latter plan seems to be unrealistic in the light of individual differences among students, it seems to be the usual method of grading students in their academic courses. Most reading specialists agree that the better plan is to grade students in terms of their progress. This technique of grading, however, causes certain difficulties. Essentially this method is dependent upon the equivalency of the test materials employed to determine the student's progress. Unfortunately, no completely adequate material or standardized tests are available. Another difficulty may arise when students discover the grading method. Some may deliberately depress their initial reading performances so that spuriously high achievement results are obtained. When credit and grades are offered for participation in a reading program, the specialist should seek constantly to deemphasize those aspects and to emphasize that the objective is reading improvement per se. One additional caution should be voiced if the program has been developed so that students are graded in terms of individual progress. The specialist must familiarize administrators, counselors, and teachers with his grading system. Faculty members who work with students must recognize that a student who has secured an above average grade in the reading program, need not be an above average or superior reader when compared to the total student population of the institution.

Certain other factors related to the actual administration of the program should also be considered. Some of these have been briefly mentioned previously. It is imperative that the specialist keep his program so flexible that the needs of each student can be satisfied. The framework of any program should be sufficiently broad so that the substitution of one training technique and exercise for another can be made easily whenever diagnosis of a student's difficulties indicate the desirability of such a step. As motivation and desire to improve play important roles in reading improvement, the specialist should be constantly alert for opportunities to develop and increase these factors. In this connection he should pay careful attention to the various materials utilized in the program. All materials should be checked in terms of interest appeal and readibility. Material should be varied, and range from comparatively simple to complex. The specialist will sometimes find that it is difficult to obtain as much material as he desires, although publishers are doing a better job in developing suitable material. Still the program director must realize that many of the students who enroll in the program will have strong negative feelings regarding reading. These antipathies will have to be broken down if the reading training is to be effective.

As previously mentioned, reading improvement programs tend to be costly. The program director should explore the possibilities of transferring some of the cost to the students who benefit from the training. One of the most effective and simplest methods to do so is to charge a laboratory fee. If this method is not possible, another workable system is to compile the exercise material into a manual which each student is required to purchase. Local conditions will determine which of these practices is better.

Problems sometimes develop in connection with the location of the reading laboratory and its physical facilities. Whenever possible, the laboratory should be located in a comparatively quiet, well-lighted and wellventilated room. It should be located in a central spot on the campus, which at the same time is somewhat removed from the main roads of student traffic. The room should be allocated to the reading program so that equipment may be readily available. ✓ Nothing is more discouraging than the task of having to assemble and disassemble equipment before and after the use of it. The availability of equipment often encourages the students to use it during their free hours. Items of equipment should be protected, however, from the curious student to whom they are enticing playthings. If feasible, the laboratory should be located in the proximity of the counseling services so that referrals may be made readily when deemed advisable.

In this discussion an attempt has been made to touch upon many of the difficulties which beset the director of a college reading program. It is realized that many problems have not been mentioned and that none have been fully explored. Many other problems arise in some institutions which are not typica or usual. In other schools many of the problems discussed will never arise. The conscientious reading specialist will always face problems in the administration of his program. An ideal program is never achieved. When the specialist has solved most of the existing problems in his program, he should seek new ones. The best reading programs are not static but rather are dynamic. It is only when one is aware of difficulties and shortcomings that growth and improvement take place.

A DEVELOPMENTAL READING PROGRAM FOR COLLEGE STUDENTS

Oscar S. Causey

Texas Christian University

The purpose of the reading program at Texas Christian University is improvement of the reading ability of college students.

Success in college, and frequently in business and the professions, depends in great measure upon the individual's ability to read well. The bulk of information is to be found in books, journals, reports and magazines. Mastery of the printed page is open only to those who can read with some fair degree of comprehension and some fair degree of speed. With few exceptions students who are most successful have developed superior reading ability. With few exceptions students who are dropped from college for poor scholarship, or are put on probation, are students who read slowly and with poor comprehension.

Few persons have developed reading ability comparable to their intelligence. Students have capacity for learning more than they do. The increase in reading ability, which comes from better reading habits, brings a valuable aid for increase in learning. All college students, regardless of how well or how poorly they read, can improve their reading ability in a properly conducted course in developmental reading.

The administration of Texas Christian University decided to begin a reading program before the director of the program was employed. The present program began in the fall semester, 1950. The policy and plans were discussed in the Deans' Council. The various schools and departments of the University gave their support from the beginning of the program. There is close cooperation between the counselling service and the reading laboratory. The numerous counsellors are supplied with information relating to students that enables them to advise students wisely concerning the reading program.

The success of the reading program depends upon the methods and techniques used. By use of the correct methods and techniques students are aided in improving five basic reading skills -- comprehension, rate, reading in thought units, vocabulary, and directed reading -- and in the integration of these skills. The result is a better reader.

The reading laboratory is open to all students and faculty members. Students from the freshman, sophomore, junior and senior classes, as well as graduate students, take the course in developmental reading. Professional people, members of business organizations and military personnel who by the nature of their work are required to do extensive reading enroll in the Evening College. The instruction is individualized and adjusted to the needs of each student. Upon entering the course each student's reading ability is determined in terms of the chosen basic reading skills. During the conferences which follow each student becomes familiar with the procedures he is to follow for one semester in improving his ability to read.

During the year and a half the reading program has been in operation, three hundred twenty-five students have completed the work in the Reading Laboratory. The progress made by this number of students is as follows:

Average Initial Comprehension ...	81%
Average Final Comprehension	90%
Average Initial Rate	219 words per minute
Average Final Rate	400 words per minute
Average Gain (by reading score)..	102%

To arrive at a score that measures a combination of comprehension and rate in an initial score, and also in a final score, use is made of the equation

$$R.S. = \frac{R. \times C.}{100}$$

In this equation R.S. = reading score, R = rate and C = comprehension.

None of the three hundred twenty-five students have failed to improve reading ability. It may be noted again that the average gain is 102 percent. Only twenty students, or six percent of the total number, gained twenty-five percent or less. More than half of those trained gained one hundred percent or more.

The greatest gain was 376 percent. This freshman, a girl, made a comprehension score of 98 percent, and a reading rate of 695 words per minute. The second greatest gain was 364 percent by a girl in the freshman class who improved her comprehension 22 percent and attained a rate of 687 words per minute.

The highest rate of 916 words a minute was attained by a young man in the senior class.

A credit of two semester hours is given for the course in Developmental Reading. The curriculum committee of the University has approved credit for three semester hours beginning in the fall of 1952.

Work is offered in the Graduate School for training of teachers of reading in colleges and high schools. Methods, techniques, procedures and materials for Developmental Reading at high school level have been prepared and tested.

In addition to textbooks the books listed below are used. Special materials and procedures have been developed for enabling the students to profit by use of these books.

Better Reading by Elizabeth A. Simpson
Fighting South (The), by John Temple Graves
First Two Decades of Life (The), Merry and Merry
Hawthorne Selected Tales and Sketches, Nathaniel Hawthorne
History of Texas Christian University, Colby D. Hall
How to Read a Book, Mortimer Adler
Kimball Contest Copy, John N. Kimball
Moby Dick, Herman Melville
New Testament
Reading Laboratory Workbook, Oscar S. Causey
Reading and Vocabulary Development, C. O. Weber
Story -- A Critical Anthology (The) edited by Mark Schorer
Story of the Johns Hopkins (The), Bernheim

A SUMMARY OF THE CONFERENCE

Rudolph Fiehler

Southern State College

The first Southwest Reading Conference for Colleges and Universities, held at Texas Christian University on April 24-25, 1952, reflects a growing interest in the development of courses in reading improvement on the college level. By custom, instruction in reading has been the peculiar function of the elementary school. The 24th Yearbook of the National Society for the Study of Education went so far as to advocate specific reading instruction in the first three grades only, but twelve years later in its 36th Yearbook, this same organization advocated reading instruction through each year of the common school program. Today there is a growing acceptance that training in reading can be helpful at every level of instruction, and that a reading improvement program in college is justified if it produces only an increase in the rate of reading.

A growing number of colleges and universities are promoting reading improvement under a variety of programs. In the Southwest, Texas Christian University has enrolled 137 students in five sections meeting three days a week for two hours credit; Texas A. & M. lists a reading course as a one-credit-hour elective in its basic program and has more than 400 students in 12 sections meeting three times a week; the University of Oklahoma assigns graduate assistants to groups of 10 to 12 students for an eight week course. Elsewhere, Purdue and Cornell have notably successful programs. Iowa Sta University includes reading as one of the four basi skills in a communications course, the other skills being listening, writing, and speaking.

The programs have developed variously, but have been most successful when they have been pushed fro the administrative level. They have been successfully assigned to English Departments, schools of Education, or to the guidance services, and joint sponsorship has been found to be entirely practicab to the counseling services and instructional staffs jointly surveying the needs of students, selecting those who need the special attention of a reading program, and determining the approach to be used whether through the clinical method, through group instruction, or through a combination of techniques.

Methods used are manifold. Experience at Texas Christian University points to the advisability of concentrating on a few areas -- comprehension, rate, vocabulary, reading in thought units, and directed reading -- rather than to attempt a wider approach through a scattering of techniques. Training in word recognition, or "phonics," is strongly advocated for those students whose deficiencies in these learnings point to special needs in this direction. Among the various mechanical devices which are available, the most generally used is the pacing device, which moves a curtain or shutter downward at a controlled rate over a page of reading material and thus requires an acceleration of the speed of reading. Schools with well-organized programs usually have enough of these machines to enable an entire class to use them at one time. Next in favor is the controlled-exposure projector, or tachistoscope for training in quick perception and recognition. With this device, students begin training with numbers of five digits at one-second exposure, and gradually reduce the interval of exposure to one-hundredth of a second, while the number of digits is expanded to seven and nine. The telebinocular, for detecting particular difficulties in vision, is accepted as regular equipment where a clinical approach is used. Films on reading improvement produced by Harvard University and Iowa State University are also much in favor.

Opinions vary as to the value of the mechanical devices. Some feel that the specific habits developed by the pacing device and the flash meter are a most effective foundation for improved skill; others think that students will be helped quite as effectively if they are simply sent to the library for a free reading period; still others maintain that the particular value of these devices, or "gadgets" is to interest the student and to provide him with an objective measure of the progress he is making.

At its closing session, The First Southwest Reading Conference voted to provide for a continuing organization by choosing an executive committee headed by O. S. Causey to publish the proceedings of the conference and to arrange for a 1953 meeting.

The distribution of representatives at the conference by position and departments was as follows:

English, eleven.
Education, eleven.
Reading, eight.
Deans, six.
Psychology, two.
Not designated, three.

PART II

SECOND YEARBOOK 1953

RECENT RESEARCH IN READING ON THE COLLEGE LEVEL

Dr. Emery P. Bliesmer
The University of Texas

The research reviewed in this paper has been arbitrarily limited to that reported in the literature during the last five years. While reports of studies relative to reading on the college level have appeared with some frequency during the last decade or more, there has been a marked increase in the number of such reports during the interval covered by this paper. Other than noting such an increase in the literature directly, this increase is further evidenced by the appearance, for the first time, of a yearbook of the *National Society for the Study of Education* which is devoted, in part, to reading at the college level, i.e., the *Forty-Seventh Yearbook* (35); and it has been only this year that a specific section for research in college reading is to be found in the *Review of Educational Research* in its three-year cycle topical coverage (12). As still further, but perhaps needless, evidence of the rapidly increasing importance and recognition being given to college reading, consider the recency of the Southwest Conference on Reading.

Descriptions of various college reading programs were found to be rather plentiful. While a review of these descriptions is not a purpose of this paper, it might be pointed out that such are to be found in over twenty of the references cited for other purposes in this paper (2; 3; 5; 6; 7; 8; 11; 13; 23; 38; 39; 30; 36; 40; 41; 42; 43; 44; 45; 47; 51; 53). It will suffice to say, at this point, that the various programs found described range from the very simple or meager ones, offering little more than attempts to increase reading speed by means of some mechanical device, to some rather elaborate ones which include research relative to various methods, systematic teacher-training programs, extensive testing, diagnosing, and evaluating of results, and the like; and that the direction of, or responsibility for, such programs varies considerably, as does also the type of personnel engaged in such work.

Evaluation of the effectiveness of particular reading programs was involved in a considerable number of reports (2; 7; 8; 11; 13; 26; 28; 29; 30; 33; 34; 40; 41; 42; 44; 45; 46; 47; 51). Positive results have been reported, almost without fail. However, methods and bases used for judging such effectiveness varied tremendously. One program involved no diagnostic testing program, procedures used being determined by the type of assistance requested by students, and the stress being upon acquisition of, experience with a wide variety of, and interpretation of appropriate use of, new skills (13). Student support of this particular program for a period of over seven years was considered as indication of its effectiveness. Another report (30) claimed evidence of improvement on the basis of a comparison of pre-training test results obtained with the Iowa Silent Reading Tests with test results obtained at the end of the training period with the Nelson-Denny Reading Test. This particular writer acknowledged the lack of comparability of norms; but she stated that "the purpose of affording the students evidence of their progress since the instruction began" was still served. Still another report (42) claimed an average improvement of 50 percent in the reading of all students who had received training in the reading laboratory and that this particular training had made it possible for a considerable number of students to continue college work successfully. Particular tests used, if any, other bases for evaluating, or specific reading skills in which improvement was attained, were not identified. Simpson (45) reported that, since the Reading Service Laboratory at Carnegie Institute of Technology had proved to be of considerable help to many students, experimental comparison of groups was rarely ever made. He implied, however, that such comparisons made during the initial stages of the service indicated that it was beneficial to a considerable number of freshmen students.

A number of studies based on conclusions relative to the effectiveness of particular programs upon comparisons of pre and post-training test results obtained with equivalent forms of a test, or tests, the Iowa Silent Reading Test being the test which was used most frequently. A statistical analysis of data was not employed in a number of the studies. Brown (7) found that fifty-five of the poorest readers among the entering students at the University of Minnesota (those scoring in the lowest 11 percent on the Nelson-Denny Test and placed in a special reading section) made an average growth in reading of 3 years in one quarter (from a 9.6- to a 12.4- grade equivalent level). Another group of forty-four students who had scored from the twelfth through the twenty-second percentile on the Nelson-Denny Reading Test initially, and who had completed a communication skills course in which emphasis was on one of three areas other than reading (listening, writing, or speaking), was found to have progressed a little over a year (from a 11.2- to 12.4 grade level), during the quarter. One-hundred-twenty-two students below the fortieth percentile on the initial Nelson-Denny Test, and in one of the special emphasis sections other than reading, were also found to have made almost a year's growth (from a 12.2- to a 13.1- grade level average).

After a laboratory course at the University of Chicago, eighteen of twenty-two entering students weakest in reading were reported by Burfield (8) as having gained enough in reading to be able to go into the writing section of English 1 or into English 2. Somewhat higher gains in rate than in comprehension were found; but, in general, substantial rate gains were accompanied by substantial comprehension gains. Finding gains in vocabulary development to be less substantial led Burfield to conclude that either vocabulary development responds less to training or else the American Council Test does not adequately reflect vocabulary growth. Charles (11) presented data to show that those students in a University of Nebraska reading and study improvement course who were in the lowest quartile with respect to ACE "L" scores made the greatest proportional gains in rate and comprehension.

Schleich (41), in a report of a three-year experiment at Worcester Junior College, stated that at the beginning of the first year over three-fourths of the students placed in a special reading class were reading below a tenth grade level (or determined by the Iowa Silent Reading Test). At the end of a semester of training, only two were still reading below a tenth grade level, with one-third reading on a college level. All of those reading below a twelfth grade level continued with another semester of training, with a mean gain of over two years being achieved. The program the second year was much the same, except for the addition of the Harvard films the second semester. Final appraisal at the end of the second year showed gains comparable to those of the first year.

Watts (51) obtained results with a rather unusual program. Students were given case studies, these were discussed, individual and group recommendations for correction were made, and actual remedial procedures which had been employed were revealed. The students applied the materials to themselves and diagnosed and prescribed for their own problems. Watts claimed that improvement was shown by Schrammel-Gray High School and College Level Reading Test scores; but no indication of significance was given, nor was a control group utilized.

In contrast to the reported studies just cited, the studies referred to immediately following did employ some type of statistical analysis of results. Murroughs (34) found thirty adults taking a reading improvement and enhancement course to have made significant improvement, as determined by Standard Reading Achievement and Effective Reading Rate Tests. Sheldon (44) reported results obtained with an experimental reading program for medical students. Scores obtained initially with the Iowa Silent Reading Tests showed only three subjects above the fiftieth percentile. At the end of the nine-week training period, all except two had reached or exceeded the median norm, and these two showed significant gains also. Speed improvement ranged from twenty to one-hundred-seventy-five words per minute, with a median improvement of eighty-five words per minute. Staton (46;47) presented comparative data for twelve Air Force officers who had completed a reading improvement course and after a time lapse of from four to twelve months had completed another essentially similar course. Analysis of data indicated that marked increase in rate, without comprehension loss, could be expected from reading improvement courses and that repitition of a course tended to result in higher reading rate than that achieved at the end of the original course.

Decidedly in the monority are the several studies which utilized control groups in judging effectiveness of results. Barbe (2) found gains in reading rate, after twelve weeks of training, to be significant for an experimental group of twenty-five students at Kent State University. The progress of a control group was almost static and was not significant. Sixty-two students enrolled in the Reading Laboratory of Western Michigan College were found by McGinnis (28) to have made statistically significant gains when initial and final scores on the Iowa Silent Reading Test were compared. No control group was involved in this comparison; but further comparisons were made with three groups of twenty students each: an experimental group with only reading laboratory training, a control group which had completed a how-to-study course, and another control group which had had neither the reading nor the how-to-study course. Comparison of initial and final scores on the reading test of the Ohio State Psychological Examination showed that the reading laboratory group had made statistically significant gains; the control groups had also gained, but not so significantly. In another study reported by McGinnis (29), an experimental group of twenty students was found after sixteen weeks of training to have made significant gains in reading ability when compared with an equated control group whose members had not had training.

Several criticisms have been directed toward evaluation procedures employed. Murphy and Davis (33) posited that progress reports of remedial work should be regarded skeptically as common errors in method often led to erroneous indications of progress. Failure to correct test scores for chance success and to consider regression effects were mentioned specifically. Robinson (40), after reviewing current remedial practices at the college level, also wrote somewhat caustically concerning methods of validation of techniques used in college reading programs. She pointed out that academic criteria were generally disregarded and that other "facile but less relevant" methods were used for demonstrating suggested improvement. She further maintained that motivational factors involved in selection of remedial course work by students had been completely neglected in reported appraisals. Results of a questionnaire-interview survey of Yale University students' attitudes toward a non-credit and volunteer remedial reading course were presented.

Robinson found a wide range of initial motivation. Less than half revealed an original motivation which might be considered advantageous to instruction; the majority participated either through coercion or as a means of avoiding certain environmental demands. Robinson also reported an evaluation of the Yale Clinic program in which scholastic performance was used as a criterion. Purportedly, an attempt was made to take initial motivation into account also. Following the training period, the academic gains made by the remedial group over a control group approached significance at the 10 to 20 percent level.

Use of academic achievement as a criterion was also found in several other studies. Barbe (1), comparing grade point averages of subjects during the quarter following remedial work with such averages for the quarter a year later, found changes in these averages to be significant at the 5 percent level for the experimental group but not significant for the control group. Charles (11) compared his laboratory group with the control group with respect to grade point average during the first semester. He found that 65 percent of the laboratory group had earned higher marks than the control group, but the difference between mean weighted averages was not significant. Comparisons made during the second semester showed that the experimental group had maintained its higher average, but the difference was still not significant. In one of the studies reported by McGinnis (29), and cited earlier, the persons enrolled in the reading laboratory made statistically significant higher point-hour ratios than did the equivalent group of control subjects.

Very little direct study of the permanency of results appears to have been made. Sheldon and McGinnis have given stated recognition to the problem. Sheldon (44) questioned the permanency of rate gains achieved in his study, and he expressed an intent to do a further survey later. McGinnis stated directly that she had made no attempt to determine the permanency of gain in reading ability in one of her studies (29). A more or less avowed intent to investigate permanency of improvement was included in the studies reported by Barbe, by Charles, and by Staton. Both the experimental and control groups in Barbe's study (2) were retested six months after completion of the former group's training. The changes in rate for the experimental group, while having decreased slightly, were found still significant over those of the control group. The permanency of changes in grade point average were not purposively investigated, but since the comparisons to determine the significance of changes were based on results obtained a year apart, the suggestion of permanency is certainly more than a slight one. A strong suggestion of permanency is also contained in the report by Charles (11), considering the continuation of the higher although still not significant, grade point average of his experimental group. Staton's analysis of data obtained relative to repetition of a reading improvement course caused him to conclude that a decline in rate may be anticipated, following completion of a course, but not one extending to the original low point (as determined by an initial test)(46).

Attempts to evaluate the materials, methods, or procedures used in reading programs have been made by several investigators. McGinnis's studies (28;29) were made in an attempt to evaluate the materials and procedures used in her reading laboratory program. The finding of statistically significant gains for the experimental groups involved led her to assume that the materials and procedures were of value in improving both the reading ability and the point-hour ratios of college students. She attributed the gains made, in part, to the nature of the materials used in doing corrective work, these having been primarily directed toward academic attainment rather than merely an increase in reading rate. She also assumed that mechanical instruments and techniques used had some effect in facilitating development of reading and study skills, but she did not regard these as being the primary effecting factors. The medical students in Sheldon's investigation (44) requested that materials more related to their fields be used in the reading program. This was tried, and while the experiment was not specially directed toward this point, indications were that such materials were inadequate for improvement purposes. Westover and Miller (53) described individualized procedures used with an adult reading class. The forty hours of training provided included practice with an individual pacing machine, tachistoscopic training with digits, and rapid reading paced by a group reading timer. Information relative to results was to have been reported at a later date, but this reviewer was unable to locate such information.

Investigations concerning effects achieved by use of specific mechanical methods have been reported by Freeburne, Glock, and Lewis. Freeburne (19) used the Flashmeter for measurement and training in perceptual span and speed. Subjects used were University of Iowa freshmen in six remedial classes who had scored at or below the twenty-fifth percentile on the Bloomers Rate of Reading Comprehension Test. Two teachers each taught a perceptual speed group, a perceptive span group, and a control group. For a period of three weeks, training in perceptual speed or perceptual span was given the experimental groups while the control groups carried on work in speaking or writing. Then all groups were given intensive reading training for three weeks. Gains, as measured by the Iowa Silent Reading Tests, made by the groups trained in perceptual speed and those trained in perceptual span did not differ significantly from those made by the control group, suggesting that the Flashmeter testing alone may have provided effective practice for the control group.

Glock (21) reported a study of the relative effect of three methods of training, or conditions upon the eye movements and reading rate. Two sections of freshmen remedial reading groups were assigned to each method, with three teachers being involved in the study. Under one condition, mechanical spacing and pacing obtained, the Harvard Films being employed to flash test in phrases across and down a screen. Under the second condition, only mechanically controlled pacing was imposed, being achieved by a film developed by Glock whereby two lines of text were projected simultaneously. Under the third condition, no means for mechanically controlling reading were used; the subjects read printed materials under the verbal set to attempt to read as fast as was consistent with comprehension. The text used in all three methods was that of the Harvard Films. Nine reading sub-test scores (obtained with the Traxler High School Reading Test, the Iowa Silent Reading Test, and the Bloomers Rate of Reading Comprehension Test) and Ophthal-O-Graph eye movement records were used in the analysis of results. The evidence did not show that techniques designed specifically to train eye movements were generally more effective than the other methods. Considering certain of the criteria, controlling eye-movement practice did prove to be superior in training rate of comprehension. No significant differences were found between methods used for improving rate when no level of comprehension was set for the reader. The efficiency of a method varied with the criterion and the teacher.

A report of an investigation by Lewis (27) showed that when two groups of adults, equated on the basis of initial reading speed, were trained by two different methods, the group trained in comprehension made a gain in speed nearly three times that of the group trained exclusively to improve eye movement exercises. A number of mechanical devices (flash-meter, metronoscope, and mimeographed eye-improvement exercises) were used exclusively with the latter group; the former group concentrated on structure of material, speed of comprehension, and insight into an author's thinking, meaning, and intent.

Information with respect to incidence of poor reading ability among college students is to be found in several reports. Bear (4) alludes to surveys which indicate that an average of 15 to 20 per cent of freshmen may be expected to be quite deficient in reading ability, with from 5 to 10 per cent being so seriously retarded that extensive individual help is needed. On the basis of Nelson-Denny Reading Test scores, Brown (7) found 6 per cent of University of Minnesota entering students reading at ninth grade level or below, 14 per cent at tenth grade level or below, and 21 per cent at eleventh grade level or below. For 338 entering students tested with the Iowa Silent Reading Test, Brown found 12 per cent reading at ninth grade level or below, 23 per cent at 10th grade level or below, and 33 per cent at eleventh grade level or below. Comparison with other colleges and universities led Brown to view the spread as not unusual but rather common.

Several investigations of the reading interest, habits, or attitudes of college students have also been reported. Abraham (1) administered a questionnaire to a cross-section of some twelve-hundred freshmen and seniors in nine colleges and universities. He found heavy school assignments checked most often as a reason for not reading more. Picture magazines were most widely read and preferred, and a lack of interest in scholarly and professional publications was indicated. Brown (7), comparing questionnaire results with individual scores and final improvement achieved with his reading training program, found that improvement seemed to depend strongly on effort, frequent use of the dictionary, practice and observation of practice effects, wide reading, attendance at Harvard Reading Films, and type of skill emphasized. Telephone answers to a short questionnaire were secured from a stratified sample of one hundred University of Illinois students by Chapin (10). Results indicated that approximately half read for recreation more than four hours per week, the percentage increasing with classification level, more veterans than non-veterans, and more working than non-working students read more than four hours. No differences were found for sex and marital status, and books most frequently mentioned were mostly standard and above (Flesch index). Hull (22), studying the reading interests of freshmen, most of whom were from rural districts, found a preference for short easy items, with more juvenile reading among junior college students than expected. The strong influence of book clubs and pocket book editions was noted, and the classics encouraged by high schools and on required lists were practically out of the picture. The amount of mystery story reading was surprisingly small. Michael, Rosenthal, and De Camp (31) found the literary preferences of one-hundred-twenty Princeton students to be affected more by their own tastes than by the prestige of authors, a contradiction of the traditional thesis of prestige-suggestion. A strong interest in vocational adjustment was found for veterans enrolled in a junior college by Weingarten (52). However, the reading of these men during the war and in college indicated an extension of interests and needs beyond the vocational and a search for reading materials to satisfy such. An investigation of the extra-curricular reading interests of students was also made by Jones (24). Preston (37) found that a small group of superior college women, who had relatively poor reading ability, felt themselves handicapped, but that they tended to rationalize, i.e., all found certain advantages in slow reading.

The problem of readability appears to be obtaining an increasing degree of recognition. Flesch's presentation of new readability measures in 1948 (16) was followed by a series of criticisms and rebuttals. Farr and his associates analyzed twenty-two employee handbooks and presented resulting data in justification of their simplification of Flesch's formula (14). Flesch (17) and Klare (25) presented rebuttals, and a reply was made to these (15). Michaels and Tyler (32) compared readability ratings obtained for a selection of United National publications by applications of the Dale-Schall, the Flesch, and the Forge Formulae. The Dale-Schall and Flesch formulae placed the materials mostly at a college freshman level; the Forge formula placed them near an eighth grade level. A reading test on the materials indicated that these were too difficult for a group of pupils whose average reading ability was that of college freshmen.

Prognosis and diagnosis in reading improvement programs were expressed as problems by some writers, and several experimental investigations were reported. Despite the relatively elaborate testing program in the University of Chicago Reading Clinics, Burfield (8) expressed a need for better screening and diagnostic test. She found that in general, those having lowest vocabulary scores gained the least; those having lowest rate scores gained the most; and those having highest comprehension scores gained the most. Brown (7) reported that high school rank furnished a fairly good index of what progress might be expected in vocabulary improvement and paragraph comprehension.

Carter (9) used a Maico Psychometer to measure changes in palmar skin resistance of each of twenty inferior and twenty superior readers while these subjects read portions of the Gray Oral Reading Paragraphs Test. He found that average change in palmer skin resistance could not be expected to differentiate between superior and inferior readers except as materials became more difficult. He suggested use of his technique in measuring frustration simultaneously with the measurement of reading achievement and in determining whether psychotherapy or merely remedial tutoring was needed. Freeburne (18) presented figures to twenty four subjects by means of a tachistoscopic device and then determined the number of figural after-effects obtaining. He found positive correlations between number of figured after-effects and total and subtest scores on the Iowa Silent Reading Test, but only one was significantly greater than zero. He concluded that the results of his study must be considered to be negative, insofar as use of the tests as tools for the teacher of remedial reading was concerned. Triggs (50) concludes, on the basis of research, that tests which break down mental abilities are much more valuable for determining techniques to be used, and predicting success in, corrective work than are tests measuring general ability. Tinker (49), coordinating the findings of a series of experiments, found that pause duration, taken alone, was not a valid measure of reading proficiency; but when combined with fixation frequency, the resulting perception time appeared to be a fairly valid measure.

Several reports were concerned with reading ability and scholastic ability or academic achievement. Murphy and David (33) reported small, but significant, negative correlations between average freshman grades and ability to reason in reading (vocabulary level being held constant). Preston and Tuft (39), investigating the reading habits of twenty-two junior women who were eligible for Phi Beta Kappa, found evidence to contradict the popular assumption that good scholarship demands efficient reading ability as a pre-requisite. In terms of the particular tests and norms used, from one-third to one-half of the group was lacking in reading speed, recognition span, freedom from regressive movements, and comprehension. Wheeler and Wheeler (54;55) reviewed a number of studies and pointed out that indications of reading ability are not necessarily measures of intelligence and that the difficulty of reading material in an intelligence test does not differentiate the poor reader unless it is sufficiently above his reading level to interfere with rate and comprehension. A study of reading proficiency and intelligence ratings of University of Miami freshmen led them to conclude that the ACE Psychological Examination is materially influenced by reading efficiency.

This paper will conclude with brief references to several investigations concerning, in a broad or general way, possible factors affecting reading. Strother (48) found that the level of muscle action accompanying the reading of materials expressive of happiness, hate-anger, tranquillity-reverence, and fear differed significantly. The greatest reaction was to fear-involking material; the least to tranquillity-reverence. He also found a more widespread involvement, heightened by practice, for a group of unselected subjects than for a group well-trained in interpretative reading. Murroughs (34) reported finding no significant correlations between improvement found on reading tests, after completion of a reading program, and retinal rivalry rates. Freeburne and Fleischer (20), investigating the effects of music distraction upon reading, found no significant differences between rate and comprehension performance of a control group and groups exposed to classical, semi-classical, or popular music during reading. They did find that the group exposed to jazz read significantly faster than the control group.

Bibliography

1. Abraham, Willard, "College Students and Their Reading-A Program for Action," Educational Administration and Supervision, 38:111-14, February, 1952.
2. Barbe, Walter B., "The Effectiveness of Work in Remedial Reading at the College Level," Journal of Educational Psychology, 42:229-37, April, 1952.
3. Barbe, Walter, "Reading Improvement Services in Colleges and Universities," School and Society, 74:6-7, July 7, 1951.
4. Bear, Robert M., "Organization of College Reading Programs," Education, 70:575-81, May, 1950.
5. Boyd, Gertrude, and Schwiering, O. C., "A Survey of Child Guidance and Remedial Reading Practices," Journal of Educational Research, 43:494-506, March, 1950.
6. Boyd, Gertrude, and Schwiering, O. C., "Remedial Instruction and Case Records: A Survey of Reading Clinical Practices, II," Journal of Educational Research, 44:443-55, February, 1951.

7. Brown, James I., "What About A College Reading Course," *School and Society* 67:387-90, May 22, 1948.

8. Burfield, Leone M., "Remedial Reading in the College," *Clinical Studies in Reading*. I, Chapter III, Supplementary Education Monographs, No. 68, June, 1949, University of Chicago Press, Chicago.

9. Carter, Homer L. J., "A Combined Oral Reading and Psychologolvanic Response Technique for Investigating Certain Reading Abilities of College Students," *Journal of Applied Psychology*, 34: 267-69, August, 1950.

10. Chapin, Richard, "The Recreational Reading of University of Illinois Students," *College and Research Libraries*, 12:155-57, 1951.

11. Charles, Don C., "College Reading and Study Improvement," *Journal of Higher Education*, 22: 265-67, May,1951.

12. Davis, F. B., "Research in Reading in High School and College," *Review of Educational Research*, 22: 76-88, April, 1952.

13. DeLong, Greta H. "Reading and Study for the Average Student," *Educational Research Bulletin*, 27: 121-24, May, 1948.

14. Farr, James N., Jenkins, James J., and Patterso Donald G., "Simplification of Flesch Reading Ease Formula," *Journal of Applied Psychology*, 35:333-37, October, 1951.

15. Farr, James N., Jenkins, James J., and Patterson, Donald G., and England, George," Reply to Klare and Flesch re·Simplification of Flesch Reading Ease Formula", *Journal of Applied Psychology*, 36:55-57, February, 1952.

16. Flesch, Rudolph F., "A New Readability Yardstick," *Journal of Applied Psychology*, 32:221-33, June, 1948.

17. Flesch, Rudolph, "Reply to Simplification of Fles Reading Ease Formula", *Journal of Applied Psychology*, 36:54, February, 1952.

18. Freeburne, Cecil Max, "A Study of the Relationshi Between Figural After-Effects and Reading Test Performance," *Journal of Educational Psychology*, 43:309-312, May, 1952

19. Freeburne, Cecil Max, "The Influence of Training in Perceptual Span and Perceptual Speed Upon Reading Ability," Journal of Educational Psychology, 40:321-52, October, 1949.

20. Freeburne, Cecil M., and Fleischer, Murray S., "The Effect of Music Distraction Upon Reading Rate and Comprehension," Journal of Educational Psychology, 43:101-109, February, 1952.

21. Gloch, Marvin D., "The Effect Upon Eye-Movements and Reading Rate at the College Level of Three Methods of Training," Journal of Educational Psychology, 40:93-106, February, 1949.

22. Hull, Raymond E., "Reading Interests of Technical Institute Freshmen, 1950, " Junior College Journal, 21:292-97, 1951.

23. Hunnicutt, C. W., "A Functional Program in Reading Education," School and Society, 67:377-81, May 22, 1948.

24. Jones, H. D., "Extra-Curricular Reading Interests of Students in a State College,", School and Society, 72:40-43, July 15, 1950.

25. Klare, George R., "A Note of Simplification of Flesch Reading Ease Formula'", Journal of Applied Psychology, 36:53, February, 1952.

26. Lewis, Norman, How To Read Better and Faster (Rev. Ed.), Thomas L. Crowell Co., New York, 1951.

27. Lewis, Norman, "An Investigation into Comparable Results Obtained from Two Methods of Increasing Reading Speed Among Adults," College English, 11:152-56, December, 1949.

28. McGinnis, Dorothy J., "A Reading Laboratory at the College Level," Journal of Higher Education, 22:98-101, February, 1951.

29. McGinnis, Dorothy, "Corrective Reading: A Means of Increasing Scholastic Attainment at the College Level," Journal of Educational Psychology, 42:166-73, March, 1951.

30. McGann, Mary, "Improving the Scholarship of College Freshmen with Remedial Reading Instruction," Journal of Educational Psychology, 39:183-6, March, 1948.

31. Michael, William B.; Rosenthal, Bernard G.; and DeCamp, Michael A., "An Experimental Investigation of Prestige-Suggestion of Two Types of Literary Material," Journal of Psychology, 28:303-23, Oct., 1949.

32. Michaelis, John V., and Tyler, Fred T., "A Comparison of Reading Ability and Readability," Journal of

Educational Psychology, 42:491-98, December,1951.
33. Murphy, Harold D., and Davis, Frederick B., "A Note on the Measurement of Progress in Remedial Reading," Peabody Journal of Education, 27, 108-11, September, 1949.
34. Murroughs, Thaddeus R., "The Relationship of Retinal Rivalry to Remedial Achievement," American Journal of Optometry, 28:581-88, 1951.
35. National Society for the Study of Education, Forty Seventh Yearbook of the, "Reading in High School and College," Part II, University of Chicago Press, Chicago, 1948.
36. Persons, Gladys L. and Grumbly, Mary H.,"Group Guidance in the Program of a Reading Laboratory", Journal of Educational Psychology, 41:405-16, November, 1950.
37. Preston, Ralph C., and Botel, M., "Relation of Reading Skill and Other Factors to the Academic Achievement of 2,048 College Students" Journal of Experimental Education, 20:363-71, June 1952.
38. Preston, Ralph C., "Inefficient Readers Among Superior College Students,",School and Society, 69:299-300, April 23, 1949.
39. Preston, Ralph C., and Tuft, Edwin N., "The Reading Habits of Superior College Students," Journal of Experimental Education, 16:196-201, March,1948.
40. Robinson, H. A., "A Note on the Evaluation of College Remedial Reading Courses,", Journal of Educational Psychology, 41:83-96, February, 1950.
41. Schleich, Miriam, "A Junior College Reading Program," Junior College Journal, 21:95-105, October, 1950.
42. School and Society, "Improving Students' Reading Abilities," School and Society, 70:187-88, September 17, 1949.
43. School and Society, Reading Laboratory of Howard College," School and Society 72:59, July22, 1950.
44. Sheldon, William, "An Evaluation of An Experimental Reading Program for Medical Students," Journal of Educational Psychology, 39:298-303, May, 1948.
45. Simpson, R. C., "Problems of the Reading Service Laboratory for College Freshmen.," Education, 68:633-39, June, 1948.
46. Staton, Thomas F., "Preliminary Evidence on Permanency of Reading Rate Increases Following

Intensive Training in a Reading Laboratory," *American Psychologist*, 5:341-42. July 1950.

47. Staton, Thomas F., and Maize, R. C., "Voluntary Reading Improvement for Air Force Officers," *School and Society*, 76:42-44, July 19, 1952.

48. Strother, George B., "The Role of Muscle Action in Interpretative Reading," *Journal of General Psychology*, 41:3-20, July, 1949.

49. Tinker, Miles A., "Fixation Pause Duration in Reading," *Journal of Educational Research*, 44:471-79, February, 1951.

50. Triggs, Frances, "The Relationship of Measured Reading Skills to Mental Abilities as Measured by Paper and Pencil Tests," *American Psychologist*, 5:285-86, July, 1950.

51. Watts, Phyllis W., "An Application of Clinical Diagnostic Techniques in the Classroom Situation for the Improvement of Reading at the College Level, *Journal of Educational Research*, 42:513-24, March, 1949.

52. Weingarten, Samuel, "Student Veteran's Reading Preferences," *Journal of Higher Education*, 20:299-302, June, 1949.

53. Westover, Frederick L, and Miller, Murray L, "Improvement of Reading Ability Resulting from 40 Clock Hours of Training with Individualized Methods," *American Psychologist*, 5:337, July, 1950.

54. Wheeler, Lester R., "The Relation of Reading to Intelligence," *School and Society*, 70:225-27, October 8, 1949.

55. Wheeler, Lester R., and Wheeler, Viola, "The Relationship Between Reading Ability and Intelligence Among University Freshmen," *Journal of Educational* Psychology, 40:230-38, April, 1949.

ASSESSING STUDENT REACTION TO A COLLEGE DEVELOPMENTAL READING PROGRAM

Dr. A. J. Kingston, Jr.
Texas A. and M. College

Since the end of World War II many institutions of higher learning have developed various types of programs designed to improve the reading skills of their students. Most of these programs have placed major emphasis on the development of faster reading rate and greater reading comprehension. Many reports of the successes of such programs have been published in various professional journals. Almost all reports seem to emphasize are increased reading rate and comprehension as measured by standardized testing devices, or, in a few cases, the improved academic achievement of students who had participated in reading programs. Few reports have been published concerning the reactions of participating students toward the programs themselves. While there should be no doubt that improved reading effectiveness and academic achievement must be considered as the primary goals of any college reading program, the discovery of how a student feels about the course can also furnish evidence of its success. This factor seems to have been overlooked or taken for granted in most institutional programs.

Reading specialists continuously emphasize the importance of motivation if the student is to achieve maximum benefit from a reading program. Most specialists also agree that it is often difficult to ascertain the degree of motivation possessed by each student enrolled in a group program. At the same time for reasons of expediency numerous colleges and universities have developed group reading programs. Sometimes it seems that we take for granted that each student possesses a maximum degree of motivation when he enters a program and that he maintains that motivation throughout the entire program. As teachers we know from experience that we can make no assumptions of this sort, but that we must continuously provide experiences which tend to increase and maintain the motivation of all of our students. It seems reasonable to assume that one of the best ways to assess the motivational needs of students is to determine how they feel about a program or course. This study represents an attempt to describe the reactions of a group of students to the various techniques employed in a typical group reading program and to assess the opinions of the students regarding the value to them of such training.

The remedial reading program at the Agricultural and Mechanical College of Texas is administered under the guise of a credit basic course. The majority of students enrolled in the program have either freshman or sophomore classification. The course is so organized that each section meets in groups of thirty to thirty-five for two fifty-minute periods each week. These periods are devoted to such activities as tachistoscopic training and practice special reading exercises from a workbook. Special reading films are also employed at these times. In addition to these periods of group work, each student devotes fifty minutes each week to training with a reading accelerator. Accelerator training is individualized so that each student progresses at his own rate.

In order to determine the reactions of students to the reading program, a questionnaire was administered to 376 students enrolled in the course during the fall semester of 1952 and to 408 students enrolled in the spring semester of 1953. All questionnaires were anonymous so that students would express their reactions freely. The questionnaires contained the following instructions: "We are interested in discovering how you feel about the Remedial Reading Program. Place a check in the space which best indicates how you feel about each question." In general the items were designed to evaluate the attitudes of the students regarding the value of the course in the improvement of reading skills and toward the various mechanical devices and special exercises employed in the program.

A tally of the responses to the questionnaire indicated that most students felt that the course had helped them to improve their reading skills. A majority also felt that the course had helped them to improve their reading skills. A majority also felt that it was easier to read their study assignments as a result of the program. It was interesting, however, to note that only slightly more than one-half of the students felt that the course had helped them to improve their academic grades. One reason for this attitude seemed to be that the questionnaire was administered prior to final examination week and many students indicated an unwillingness to make comments either pro or con. It should be also pointed out that in general the students who were enrolled in the reading program tended to represent a below average group in scholastic aptitude. For many students poor reading skill was not the fundamental cause of academic difficulty

An apparent inconsistency was noted in the responses made to the items designed to evaluate the development of mature reading habits. Although over sixty percent of the students indicated that they enjoyed reading more than they had prior to enrolling in the program, only thirty-five percent stated that they did more recreational reading than they had prior to receiving training. Many students volunteered the information that they were unable to do as much recreational reading as they would have like due to the pressure of their academic duties. It is doubtful, however, that this excuse can be accepted at face value. It seems more likely that many students will not transfer acquired reading skills to recreational reading unless this goal is emphasized in the reading program.

The responses to items designed to determine the attitudes of students toward the various devices employed in the program were interesting. Most students felt that the reading accelerator was most beneficial. The reading films, the workbook, and the tachistoscope received votes in that order. Any interpretation of these responses must rely upon the answers to other questions not encompassed by this study. Can students tell which technique of remediation is the most or the least valuable to them? Did students respond to the items in terms of their own felt needs? Did the methods of utilizing the devices influence the responses of the students? A previously mentioned, this study did not presume to investigate these factors, but these results point out the need for a more careful investigation designed to demonstrate the value of using various mechanical devices for motivating students.

The use of the questionnaire method enabled those ho were conducting the reading program to ascertain how he participating students reacted to it. Although the esults seemed to indicate that most students felt that they had benefited from the course, they also revealed areas which seemed to need further analysis. For example, during the fall semester, many of the reading instructors believed that too much time was being devoted to vocabulary development. The questionnaire indicated hat the students disagreed. Similarly the length of the course during the fall semester had been approximately twelve weeks for some of the sections. Many students felt that the program was too short. As a result of the questionnaire the length of the program was lengthened to fifteen weeks and more vocabulary training given. The results of the spring questionnaire served to reflect these changes. Since motivation plays such an important role in reading improvement it would seem that some method of this type which would reveal student reaction to the course content, teaching techniques, and mechanical aid should supplement the more common methods used in the evaluation of a reading program.

The table on the following pages illustrates the responses to the questionnaire discussed in this study.

Instructions: We are interested in discovering how you feel about the Remedial Reading Program. Place a check in the space which best indicates how you feel about each question.

Item

1. Has this course helped you to improve your reading skills?

2. Do you find it easier to read your study assignments now than you did before taking this course?
3. Do you feel that this course has helped you to improve your grades in any of your academic courses?
4. Do you now enjoy reading more then you did before taking this course?

5. Do you do more recreational reading now than you did before taking this course?

6. In order for you to develop adequate reading skills, do you feel that the length of this course is:

7. Which of the techniques used to help you has been the most valuable?

8. Which of the techniques used to help you has been the least valuable?

9. Do you feel that sufficient time was devoted to vocabulary development?

	Fall Semester 1951		Spring Semester 1952	
	Number Students	%	Number Students	%
Yes	365	97.07	395	96.81
No	11	2.93	10	2.45
Und.	0	0.00	3	.74
Yes	326	86.70	360	88.24
No	50	13.30	47	11.52
Und.	0	0.00	1	.24
Yes	205	54.42	259	63.48
No	151	40.16	136	33.33
Und.	20	5.32	13	3.19
Yes	241	64.10	245	60.05
No	131	34.84	158	38.73
Und.	4	1.06	5	1.22
Yes	133	35.57	144	35.29
No	240	63.83	257	62.99
Und.	3	.80	7	1.72
Too Long	15	3.99	24	5.88
Too short	242	64.36	214	52.45
Just right	119	31.65	167	40.93
Undecided	0	0.00	3	.74
Tachistoscope	19	5.05	24	5.88
Reading Pacer	150	39.89	165	40.44
The Work Book	44	11.70	56	13.73
Reading Films	133	35.37	116	28.43
Undecided	18	4.79	22	5.38
Tachistoscope	156	41.49	177	43.38
Reading Pacer	68	18.09	58	14.22
The Work Book	70	18.62	63	15.44
Reading Films	64	17.02	86	21.08
Undecided	18	4.79	22	5.38
Yes	145	38.56	191	46.81
No	229	60.90	209	51.23
Und.	2	.53	8	1.96

VOCABULARY DEVELOPMENT IN COLLEGE READING PROGRAMS

Miss Loris DeFigh
University of Tulsa

Reading is by nature a thoughtful activity. The chief characteristic of any good silent reading performance is mental elaboration of ideas. The ideas are those presented by the writer, those brought into the reading situation by the reader out of his own past experiences, the new ones created and the old ones modified by the intermingling of the two. Ideas must be understood when presented; they must be interpreted, evaluated, and applied in some way in order for reading to serve a worthy purpose.

However, none of this mental activity involving ideas could happen without adequate command of the means by which the ideas are first stimulated. Words are the "triggers" that set up the patterns of thought in the reader's mind at the outset. Without complete understanding of these "triggers" the whole communicative experience would be impossible. Both writer and reader must understand the symbolic system employed in order to engage in linguistic intercourse. Words and ideas are inseperable. The former is a means to the latter. This being the case, emphasis must be placed on vocabulary control and development in any good reading program. Students must, as they express it, "talk the lingo" of many areas of expressed ideas. They must become sensitive to the thought conveyed. They cannot be like the oral reader who expressed with exactness a selection to an audience, but upon being questioned about the ideas she had read, replied, "I don't know. I wasn't listening."

Individuals are constantly expressing their own ideas in one way or another. They are also continuously engaged in getting impressions of the ideas of others. All human beings have natural urges to communicate with one another. They will develop these abilities in the natural course of growth. In a systematic program of developing ability to express thoughts or derive impressions, we are simply training individuals to do with greater effectiveness what they have the natural urge to do, and would do, in one way or another, anyway.

Students have a need to develop two kinds of vocabularies: an expressive vocabulary which includes the symbols used in writing and speaking, and the impressive vocabulary which they will use in reading and listening. There will be symbols that students will know as a part of one of the above vocabularies and not the other. For example, it is not un-common for a student to have a "hearing" knowledge of a term and yet be unable to use it to express an idea of his own. Recently I overheard a student remark about a work, "Sure, I know that. I've heard it lots of times!" but when asked to give a clear explanation of its meaning, or to use it correctly to express an idea, he was completely at a loss to do so. We superficially hear words used and see them in print, without any clearcut concept of the reaction their use should stimulate in our minds.

The example cited is illustrative of one of the major problems in vocabulary development at the college level- namely, to make students more acutely aware of their vocabulary inadequacies. Years of practice in passing superficially over words they do not know, moving blithely along the lines of print, happily ignoring whatever strange words are there, is not conductive to vocabulary growth.

One of the first steps toward vocabulary development among college students is to develop a "word conscience;" a word conscience that nags at the reader every time he snubs a symbolic friend. He must learn to recognize when a word does not create an impression in his mind and discipline himself to see its meaning at once, both in the present contest where it occurs, and also wherever else it might be encountered presenting a different concept.

A second problem with which we must deal is an inadequate background of experiences necessary for the varied interpretations that must be made by the reader in widely differentiated areas of content. This is particularly true at the college level where higher level reading materials deal with ideas that are so abstract, so elusive, or so "long ago and far away" from the experiences of the reader. I can recall a young man with whom I worked recently who, over the years of pre-college, had approached the problem of vocabulary extension largely through looking up lists of words in the dictionary. He had looked over the meanings given; assumed they said somewhat the same thing, picked out the shortest one (He was physically lazy as well as mentally so!), and wrote it down. Upon the surprising discovery of the extent to which one can go in interpretating and using a single term. he cried in distress, "I'll never learn all that. I thought I knew the meaning of these words!" When words can stand for so many concepts, many of which the student has not an adequate experience to develop, we have an extremely hazardous pitfall to avoid; that of talking with words about words. To do so can become a reckless, thoughtless, and extremely worthless activity indeed.

A third problem that students present is their inability to use the skills of word attach necessary to identify the word to be learned. These skills may seem to be quite elementary to some, and it is quite true that they are first taught at the elementary school level, but nevertheless, students continue to arrive at college unable to employ the necessary tools of word attack that are absolutely essential in the approach to word-learning. College reading programs have no other choice than to assume the remedial job of supplying the necessary instruction in these skills to students whose previous training in them has proved inadequate. Without the ability to employ these lower-level skills, we cannot move with the student into the wordstudy areas that employ higher-level abilities in vocabulary development.

HOW DOES A VOCABULARY GROW?

Vocabulary development is a gradual process of growth in word control. This growth process proceeds in three directions which might be referred to as height, breadth and depth.

Height begins the process. Children build their knowledge of words upon words, acquiring more and more in number, piling them up higher and higher. Through listening and talking the number of known words increases until by the age of six, when they enter school, they bring with them a speaking and listening knowledge of approximately 2,500 words. Then the reading vocabulary is introduced. In the beginning much of the vocabulary consists of a transfer of terms from those already known in speaking and listening to the reading and writing situations. After a while the vocabularies of all the facets of language become more parallel and together move upward in an inter-related way. Words met in reading must become usable to the student in speaking and writing. Words heard and seen must convey meaning in reading situations.

In order to change unfamiliar words into familiar ones, one must acquire a working command over certain types of skills: (1) those concerned with pronounciation, and (2) those concerned with understanding meaning.

Students attempting to attach an unfamiliar word must employ the following aids:

a. Use of the context surrounding the unknown word as a means of figuring out what the word is;
b. Use of certain analysis techniques, either phonetic or structural, i.e., consonant letter sounds, vowels, syllabic accent, etc.;
c. Use of the dictionary.

These aids are very useful to the student if he knows how to use them. Many college students do not. It has been my unfortunate experience to encounter many college freshmen who have no working knowledge of the independent attack that can be made upon a word.

They seem to be unequipped to make use of the very elementary knowledge of the application of the final e principle, vowel diagraph principle, understandings concerning syllable division, assignment of vowel sounds within syllables, etc. when attempting to pronounce a new word. They depend upon context as best they can, or, if they are really concerned about complete clarification of the word, they seek it in the dictionary. If they are not concerned, they ignore it and go on without a clarification.

A young freshman I observed recently will serve as an example of the use that can be made of some of these skills. I watched him attack the word antipathy as follows: He first analyzed visually the word's structure; that is, its root plus the prefix anti, and noted the y ending, often found on noun forms. He recognized the meaning of anti as "against." So he reasoned the word as naming something which is against something. His next step was to identify the meaning of path. He made an association at this point; he recalled that the word sympathy contained the same word part. This word means "same feeling" or "being of the same frame of mind." Therefore, path in antipathy must mean "feeling", and with the suffix anti, the meaning must be "feeling against something," or"being of opposite frame of mind." He checked his reasoning against the context, decided it made sense and continued on his way in the reading situation. He knew and employed useful tools of structural analysis to enable him to get the new word quickly without having to interrupt the line of thought while he consulted a dictionary.

It should not be assumed that the student should never use the dictionary. Indeed it can be one of his most valuable tools. However, it should truly be a tool and not a crutch. A dictionary might well be employed in the above example at the end of reading session to check the line of reasoning of the student. In this way he may be sure his attack was correct. It should be used also when the efforts of independent attack do not yield the desired results. They cannot always do so in a complete way, but to the extent that they can be used, they are time savers and efficiency builders.

The use of the dictionary presents its own problems with students. Unfortunately their command of the dictionary skills is often so poor that they will spend as much time attempting to utilize the dictionary as they will with the actual material that they wish to read. When this is the case, the dictionary cannot function as the aid it is meant to be. If students better understood the use of guide words, the pronunciation symbols, accent marks, and other such skills concerned with locating the word and interpreting its meaning; if they were able to understand the meanings given, make the appropriate selection for the given context in which the word appears and "tune" the meaning into this context in an understandable way, much wasted effort could be conserved.

I do not wish to imply that their previous training has neglected to include the skills. Probably these students have been subjected to at least some of them before in their earlier school experience. However, it remains a fact that many of them are in college today without the command of skills necessary to effectively employ them in their study activities.

If students were able to efficiently employ all these techniques, they would have tools with which to work toward building their stock of words, and the pile would grow higher and higher. The numbers of words added should increase continuously.

Vocabulary must grow in breadth as well as height. This means that students extend outward, broedly, their knowledge of known words. There are many ways that this is done. One way is to recognize the many forms that a single word can have and the many functions it can perform. If a new word is first met as a noun, then the student may extend his vocabulary knowledge of that single word by discovering if it can function as a verb, an adjective, or some other part of speech, sometimes by merely changing slightly its basic form or structure. This is illustrated in the word *ego*, which can become *egoist*, *egotist*, *egotistical*, *egoism*.

This knowledge can broaden still more if a student comes to understand the varient meanings the word can have, sometimes without changing its structure or function in the sentence. The simple word *line*, functioning as a noun without changing its form, may mean: a line of print, a clothes line, a telephone line, a line of attack, a line of people, a fishing line, a line of talk.

Becoming acquainted with a word's relatives can broaden the vocabulary knowledge we seek. An example of this is in the word *automobile*, which can spread its relations over a wide area to include autocrat, automotive, autobiography, automatic, autograph, automoton, autonomy, autointoxication, authority, authorize, authentic, and autopsy, and many others.

One can further broaden their word understanding by association of words with other words when their meanings contrast. It has been said that, "A thing is never so black as when it's compared with white," and that is appliable here. Sometimes meanings can not be so well understood until they are placed alongside an opposite meaning for comparison. Using antonyms and synonyms is a very effective way to intensify understandings of the known word and also to stretch forth to the realms of others, some of which are unfamiliar and offer new opportunity for more word exploration.

In addition to antonyms, the word study would also include synonyms, homonyms and heteronyms. This broadening of meaning gives the student greater possibilities for interpreting intended meaning.

The third and final aspect of the vocabulary development process is depth. This is a much more subtle phase of the process than the first two and has its place at the higher levels only, after a firm foundation for it has been established in the two phases previously discussed. In this aspect we must consider vocabulary as it expresses mood, qualification, degree, implication, association and figurative meaning. This phase of language development, perhaps more than the others, builds an appreciation of the richness of our language. Figurative language should not be restricted to the reading of fairy tales, poetry and legends of childhood. We must not overlook the opportunities offered in the study of idioms, satire, irony, and non-literal language as we work with students at the higher levels.

They need to feel the undertones, to sense the bias, the exaggerated, the playing up of one understanding and the minimizing of another, through clever choice of words. They need to recognize the emotional appeal, the sarcasm, the "goody-goody" overplay that one encounters so frequently in materials meant to propaganidize, to exert pressure, and by such means seek to control the thinking of the reader.

It would seem appropriate in summary to point out the following considerations that teachers at the college level must take note of in vocabulary development as a part of their reading programs.

1. At the college level it is not uncommon to find students at many levels in their vocabulary development. The instructional program for them must begin at the point of the development of student and must be largely an individual matter.
2. In order to insure the student against "word-learning" on purely a verbalistic level, the words must be outgrowths of actual or vicarious experiences of the student in language situations. Much doing, seeing, talking and listening, as well as reading, should be the stimulus for word study.
3. Materials used should be varied in type, content and difficulty. A good reading program de-

velops versatility in the reader in order that he may broaden his reading experiences for his personal competence and enrichment.

4. Students should be helped to develop more wholesome attitudes about reading. They should be helped to see the value in being able to express themselves well and to interpret the ideas of others with clarity and understanding. Only through better use of their communicative abilities can they achieve their own fullest personal realization and at the same time develop complete harmony and understanding between themselves and others.

TYPES OF READING PROGRAMS

Dr. William Eller

University of Oklahoma

For the past year the Executive Committee of the Southwest Reading Conference has been collecting, by means of questionnaires, information about reading improvement programs in colleges and universities throughout the South and Southwest. Examination of this data suggests that there may not be distinct types of reading programs as suggested by the above title; the examiner is more likely to be impressed by the similarities of these various programs than by their differences.

The college instructor faced with the task of establishing a reading program in his college usually starts with an inquiry into the methods and materials of existent programs in his vicinity. The typical questions asked have been used as a basis for the following summary of current practices.

1). Department in charge of reading program:
In almost all institutions the college reading courses are administered by one or a combination of these departments -- Psychology, Education, Guidance, English (Communication Skills).

2). Nature of instructional staff:
The academic ranks of reading instructors is a matter that is determined by size of institution and the extent of development of the reading program. In most cases the pioneering work is done by a staff member with the rank of assistant professor or higher, but once the program is under way and especially after it has expanded to several times its original enrollment, assistants of lesser academic rank are often employed. Particularly in larger universities the bulk of the actual teaching is done by graduate assistants and others who have not attained professorial status.

3). Basis of student referrals:
This is one aspect in which there is considerable variation between schools. In some institutions the reading course is offered on an entirely voluntary basis, while in others, all the enrolees are selected by screening tests and are required to take the course just as much as they are required to take freshman English. Most colleges which require poor readers to take work in reading, also provide sections in which other students may enroll voluntarily. Voluntary enrollments result from referrals by advisors, professors, counselors, friends and scholastic committees in fraternities and sororities. Some students enroll without specific referral because they are suspicious of their own reading abilities. Publicity in school newspapers stimulates this last type of enrollment.

4). Total hours of instruction:
The total amount of instructional time varies from a minimum of 10 or 12 hours to a virtually unlimited amount. It is impossible to calculate a maximum in a few colleges because students are permitted to repeat the reading courses until they feel that they have profited maximally. In the Southwest the model situation is the one in which two or three hours of instruction are offered each week for a semester.

5). Academic credit given:
Just three or four years ago very few institutions were allowing academic credit for reading improvement courses. Many college curriculum planners felt that students should take such a self-improvement course without credit on the assumption that they should have learned to read before entering college. The allowance of credit then, is partly a product of the spread of the philosophy that reading skills should be developed throughout the academic life of the student. A second and more realistic reason is student demand for credit, and limited student interest when no credit is given. Both interest and attendance seem to be helped when credit is offered.

6). Cost to Student:
Almost all colleges provide reading training at no

extra cost to their own students but there are a very few which charge a small fee on the logic that since considerable expensive equipment is involved a fee is as justified as in other laboratory courses.

7). Equipment Used:
As would be expected, the equipment employed varies from college to college, but there are three types of mechanical aids predominating: (1) reading films: (2) reading rate accelerators: (3) tachistoscopic devices. A few large scale programs use mechanical equipment which is the product of local ingenuity.

8). Materials Used:
In addition to the slides needed for tachistoscopic presentation and the prose material used on the rate accelerators, most college reading instructors use workbook type exercises. Of the commercial workbooks, _Improving Reading Ability_ by Stroud and Ammons, and _The College Developmental Reading Manual_ by Wilking and Webster, are widely used.

9). Treatment of Severely Retarded Readers:
A very small percentage of college students are such inefficient readers that they cannot profit from the type of instruction given to the great bulk of their contemporaries, and in fact, would only be frustrated if continuously exposed to it. It is standard practice to deal with such problem cases either individually or in very small groups, and usually simple reading materials are provided.

SOME PROCEDURES IN DEVELOPMENTAL READING IN COLLEGE

Oscar S. Causey

Texas Christian University

It is unnecessary to make an issue of the importance of effective procedures in a course designed to improve reading ability of college students. Whether a *best set of procedures* exists at this time is debatable. Methods, techniques and procedures used successfully by an instructor in one situation might not be highly successful in the hands of another in a different situation. But the necessity for using specific plans remains, whatever the teaching situation.

Some degree of success has been attained by use of the outline given below.

I. General Objectives: Improving reading ability of college students.

Specific Objectives. 1. Improvement of comprehension, (a) grasping significance of passage (b) finding implication, (c) justifying opinions, (d) noting details (e) classification of ideas, (f) comparison of ideas, (g) generalization. 2. Increasing rate of comprehension. 3. Enlargement of vocabulary. 4. Reading in thought units. 5. Skimming. 6. Directed reading.

After the students are given an explanation of the above objectives, procedures are introduced that are designed to provide individual improvement in the area of each objective. Each student checks frequently his progress. (See Daily Work Record on page 56 for illustration.)

II. Each of the topics below (underscored) is ✓ presented by lecture and is followed by discussion.

Psychological Aspects of Reading. 1. Reading as thinking. 2. Emotional experiences. 3. Reading for information. 4. Recreational reading. 5. Interpretation as it relates to experience.

How We Learn. (1)(2). 1. Some basic principles of learning. 2. Application of the principles to improvement of reading.

Reading as a Composite Skill. 1. Identification of fifteen reading skills. 2. The six skills to be developed in this course. 3. Integration of the six skills. 4. Individual reading patterns.

Developing Skills. (3)(4). 1. Neuro-muscular skills (an illustrative approach). 2. Mental skills. 3. Some principles of learning in use in improvement of reading ability: (a) readiness (b) frequency (c) recency. 4. Use of principles of learning in improvement of reading ability.

The Perceptions and Reading. (5) 1. Identification of six perceptions. 2. Auditory perception in relation to reading. 3. Visual perception and reading in thought units.

Sustained Attention. (6)(7)(8)(9)(10). 1. Importance of sustained attention. 2. External stimuli. 3. Inner wayward thoughts. 4. Recent emotional experiences.

Getting Acquainted With a Book. (11)(12). 1. The title. Implication of the title. 2. The author. The author's purpose in writing the book. 3. The preface. 4. Table of contents. 5. (a) Has the book an index? A Glossary? Bibliography? Footnotes? Maps? Charts? Tables? Pictures? (b) What use is made of each of these parts in (a)? 6. Format. Type. Different sizes of types. Why different sizes of type? 7. Word analysis. One-syllable words. Three syllable words. Words with more than three syllables. 8. Length of sentences-short, long, very long, varied lengths. 9. Length of chapters. 10. Documentary abbreviations. Use of documented references.

Using a Book. (13)(14)(15). 1. Statement of purpose in reading a book. 2. Skimming. 3. Expected rate of reading - high rate, average rate, slow rate, very slow rate. 4. Will purpose in reading book be fulfilled by reading the book once, twice, re-reading some chapters? 5. Taking notes on the book. 6. Reading for making a book report.

Procedures. 1. The reading ability of each student is determined in terms of comprehension, rate of comprehension and vocabulary. 2. The initial reading score of each student is found by the equation Reading Score equals rate times comprehension divided by one hundred.

3. Initial reading scores and vocabulary scores are given to each student at the beginning of the course. 4. Materials to be used in the course are discussed. The students examine the materials. 5. Instructions are given in the use of laboratory equipment. 6. The students learn their daily procedures. (In devising some of the daily procedures liberties have been taken with use of the "Morrison Mastery Technique" in changing it from "test, teach, test, modify the procedure, teach and test to point of mastery," to "test yourself, learn, test yourself, confer with your teacher, learn, test yourself, learn to point of maximum improvement.") 7. The objectives of the course mentioned above are given to the students. 8. Students determine each day the percent gain or loss in comprehension and rate of comprehension. 9. Progress reports are made frequently. (See Progress Report on page 57). 10. A "success pattern" for the course is given to the students. 11. Vocabulary tests are given five times each semester. 12. Work outside of class includes three areas: (a) vocabulary building, (b) improvement in comprehension and (c) assignments in use of magazines and newspapers. Assignments in (a) and (b) are made on a weekly schedule. The following workbooks are used in the course: "Improving Reading Ability by Stroud and Ammons, Concerning Words, by J. E. Norwood, Reading and Vocabulary Development, by W. O. Weber, and Reading Laboratory Workbook by Oscar S. Causey.

The chief emphasis in the course is placed upon improvement of comprehension. Approximately two thousand questions have been prepared on books which the students read in the laboratory. Some of the questions are used daily by the students in order to discover the extent of comprehension of material read. In order to provide, at least in part, for variation of interest of reading, fifteen different books have been provided as a part of the laboratory equipment. There are three hundred copies of the fifteen different books. An ample supply of selected magazines is also available.

III. Evaluation. At the end of the semester, evaluation of achievement is made on the basis of progress made by each student. The measures are objective. Progress made toward four of the stated objectives is the basis of measurement -- comprehension, rate of comprehension, reading in thought units and vocabulary.

DAILY WORK RECORD

Name ______________________ Date ______________

READING PACER

Title of Book ______________________________
____
Setting of Pacer ______________________________

	With Pacer	Without Pacer
Pages read		
Reading rate		
Comprehension		
Average		

Present reading score ______________________________

Initial reading score ______________________________

Percent gain ______________

PROGRESS REPORT

1. Name____________________Date____________________

2. Name of book ____________________________________

3. Starting time ____________________________________

4. Finishing time __________________________________

5. Reading time ____________________________________

6. Number of words read ____________________________

7. Reading rate in words per minute __________________

8. Comprehension ____________________________________

9. Reading score ____________________________________

10. Initial reading score ____________________________

11. Percent gain ____________________________________

Two types of material are used in the final evaluation - (a) standardized tests, (b) teacher-made objectives tests.

IV. Outcomes. In order to discover some of the subjective outcomes three approaches to students have been made: (a) group discussion, (b) individual conferences, (c) written evaluation of the course with or without student signatures. In making the third approach, students are earnestly requested to make both favorable and adverse criticisms. Among the important outcomes are changed attitudes and feelings that defy accurate measurement. The last two approaches are more fruitful. Some adverse criticisms have been valuable in further course planning.

Among important outcomes in the area of feelings and attitudes were the following: a better attitude toward learning; the feeling of satisfaction that accompanies achievement; the feeling that follows success; satisfaction that accompanies success; satisfaction that comes with smooth rhythmic reading; and increased desire to learn; more self respect because of better preparation of class assignments; preparation of class assignments in shorter time; a better attitude toward use of the library. Reports showing improved attitudes toward use of books were particularly pleasing.

BIBLIOGRAPHY

1. Woodworth, Robert S., Psychology, 4th Edition, Henry Holt and Company, pp. 293-325.
2. Merry and Merry, The First Two Decades of Life, Harper and Brothers, Chapter 8.
3. Davis, Robert A.,Psychology of Learning, Mc-Graw-Hill Book Company, Chapter V.
4. Lewis, Norman, How To Read Better and Faster, Thomas Y. Crowell Publishing Company, pp. 1-55.
5. Davis, Robert A., Psychology of Learning, McGraw-Hill Book Company, Chapter III.
6. Witty and Kopel, Reading in the Educative Process, Ginn and Company, pp. 205-265.
7. Gray, William S., Supplementary Educational Monographs No. 74, University of Chicago Press, pp. 22-29
8. Prescott, Daniel Alfred, Emotions and the Educative Process, American Council on Education, pp. 155-180.

9. Harris, Albert J., *How To Increase Reading Ability*, Longmans, Green and Company, p. 233 ff.
10. Woodworth, Robert S., *Psychology*, 4th Edition, Henry Holt and Company, pp. 43-53.
11. Williams and Stevenson, *A Research Manual*, Harper and Brothers, 1951.
12. Marfarum, Edward Wayne, *How To Use A Book*, Rutgers University Press, pp. 43-49.
13. Adler, Mortimer, *How To Read a Book*, Simon and Schuster.
14. Marfarum, Edward, *How To Use A Book*, Rutgers University Press.
15. Jackson, Holbrook, *The Reading of Books*, Charles Scribners' Sons.

EVALUATION OF READING FILMS

Dr. William Eller

University Of Oklahoma

Since reading films are designed to aid in the improvement of reading rate, an evaluation of such films might well begin with a consideration of the reasons for slow reading by high school and college students and by adults. Buswell has indicated that when adults read slowly and inefficiently - and most adults do - it is usually because of one or more of the following factors: (1) Short span of recognition, (2) Unnecessarily long fixation time, (3) Numerous regressive movements, (4) Sub-vocalization and (5) Limited vocabulary.

Of these five factors, the first four are useful in a consideration of the values of reading films. While extent of vocabulary is a very important influence upon rate of reading, it is a factor of a different nature than the other four, since it involves so much less "habit" and so much more higher mental process. Because it is not a matter of habit, vocabulary size is not much affected directly by reading training films, which are planned to aid in the substitution of good reading habits for bad. However, vocabulary-building exercises which employ other materials are rightfully included as a part of many high school and college reading improvement programs. (See "Vocabulary Building by Loris DeFigh, page 13.)

There are two batteries of reading films in wide use in speed training reading today, the Harvard Films and the Iowa Films, both of which present stories arranged in phrases which appear on the screen for brief intervals of less than a second. The phrases are presented in typical reading fashion in that they proceed across the screen from left to right and down the screen from top to bottom. Only one phrase of the story is distinctly visible at any given moment. Since the stories are presented in phrases instead of individual words, and since each phrase is on the screen for such a short time, the reader is more or less forced to read by phrases instead of word-by-word. After a certain amount of this practice, the typical student has markedly lengthened his span of recognition, thus overcoming Buswell's first factor. The second factor is dealt with at the same time, because the phrases are on the screen for such short intervals that long fixation times are impossible. Because only one phrase is distinctly visible at a time, and because a phrase disappears after its brief appearance, regressive movements are futile. Thus Buswell's third cause of slow reading is treated by the films, as regressive movements go unrewarded and thus tend to disappear.

Reading films also tend to get rid of the fourth listed cause of slow reading, sub-vocalization, but in a less direct manner. A reader who sub-vocalizes says each word to himself as he reads it, even though he may not move his lips. It is obvious that this places a definite limitation on his rate of reading, because he can not read silently much faster than he can talk.

When reading films are employed to speed reading, each film is usually presented at a slightly faster speed than the film which was used during the preceding training period. For example, if a film story was presented at 290 words per minute on Monday, the story rate for Wednesday might be 315 words per minute. As the rate of presentation increases, eventually a speed is reached which prohibits sub-vocalization simply because the reader cannot "talk" fast enough to say the words to himself and still keep up with the film.

Many reading specialists feel that the greatest value of reading films, or any mechanical device, is motivational. Certainly films can provide a great deal of motivation, although if the stories are dull or of an inappropriate level of difficulty, the effect might be negative.

After the foregoing consideration of the rationale of reading films it is appropriate to consider the question: How effective are reading films in actual practice; specifically, what are their advantages and limitations?

Most college reading instructors who have employed films as a segment of their programs are satisfied that the films are valuable. Surveys of students enrolled in reading improvement courses at both Texas A. and M. and Oklahoma University have indicated that they also consider the films worthwhile. When asked to name the materials and instruments most helpful to them, the students ranked reading films second, just slightly below reading rate accelerators.

The most obvious limitation of reading films is their lack of flexibility for adaptation to individual differences. Usually the films are used with groups of students; even when an attempt is made to group the students homogeneously according to reading rate, the story is often presented too rapidly for some readers and too slowly for others. This problem is not always as great as it seems to be for the slow readers because a few of them need to be pushed. These same few slow readers do not seem to have enough self-discipline to profit maximally from individual reading devices such as reading accelerators and small tachistoscopes. For such readers the day by day acceleration of the film presentation can be advantageous.

As the rate at which the stories are presented increases, some students find they are unable to keep up with the group. The slower students can be accomodated in various ways. If they cannot be separated from the rest of the group, the increase in speed can be made less difficult for them if the new film to be presented during the class period is preceded by one or two of the films already viewed during previous sessions. If the slow readers can be separated, it often proves helpful if one or two films of similar speed can be shown during two or three consecutive class periods before any faster films are employed. Also, most motion picture projectors have some speed control, and it is often possible to regulate the speed of story presentation by simply controlling the projector speed.

Some of the more rapid readers complain that they can read 600 words per minute from standard printed text more easily than they can read 450 words per minute from a film. They find that the film phrases are too short or that the fixation times are too long for comfortable and efficient reading. Some instructors feel that it is desirable to use reading films only until students can read 400 words per minute or slightly faster. After this speed is attained, the films are abandoned in favor of other materials.

A few students indicate that they are bothered by the irregularity of increases in speed from film to film. Among the Iowa Films the gain in speed from one day to the next may be only 5 words per minute, but the following day, it may be 25 words per minute. It seems doubtful that this inequality of speed gain is very serious. It is more likely that the student difficulties arise from varying degrees of interest in the context, varying difficulty of the stories and fluctuating conditions of projection. Often when two films are shown during the same class period, some students insist that the slower film actually presented its story faster.

Two common complaints about reading films are not serious enough to provoke worry. The first of these is that reading from films is highly artificial. This would be a legitimate complaint except for the fact that the distributors of both the Iowa and Harvard Films have provided supplementary reading materials which are to be used in conjunction with the films. When these particular materials are not used, nearly all instructors provide some other typical reading selections. Occasionally someone who has only limited experience with reading films is perturbed by what he calls "the unrealistic arrangement of the phrases". Sometimes a single phrase will contain the end of one sentence and the beginning of the next. The experienced instructor is not bothered by this and the students do not complain about it because both instructor and student have discovered that rhythmic reading is more important than neatly arranged phrases.

In summary, there seems to be a little doubt that reading films contribute materially to the total reading program, but like most types of equipment, they should be used in connection with other techniques rather than by themselves.

DEVELOPMENTAL READING COURSE AT CONVAIR

Mr. R. A. Wagner

Publicity Committee, Convair

The industrial management man must read a large volume of increasingly complex material. He must depend, to a large extent, upon written material for the information necessary to the effective direction of his job.

Unfortunately, much of the reading matter that comes his way contains a large amount of non-essential material. However, he cannot assume the contents of any item. He must be able to select and thoroughly understand that which is important, without permitting the reading process to interfere with the many other important demands made upon his time.

The Convair Management Club, Fort Worth Division, recognizing the importance of reading rapidly and understanding clearly, recently sponsored a course in developmental reading. The course, designed to increase speed of comprehension, was one of a number of courses which are offered through Texas Christian University under the sponsorship of the Management Club. It ran from June 5th to August 25th and carried three semester hours credit. It was taught by Professor Oscar S. Causey, Director of the Reading Laboratory of Texas Christian University. Professor Causey, an outstanding authority in the field of developmental reading, is also Chairman of the Executive Committee of the Southwest Reading Conference for colleges and universities.

The Management Club offered ten scholarships, covering the tuition costs, to the ten students making the highest reading scores. The enrollees who won the scholarships made an average gain of 139% in reading ability. That is, they doubled their reading scores and threw in an extra 30% for good measure. The percentile gain was determined by comparing the initial reading scores with final reading scores with use of the formula, Reading Score equals Rate times the Comprehension divided by one hundred.

The average gain for all trainees was 98.3%. The lowest average gain made by an individual was 28%. The greatest average gain by an individual was 214%.

Reading laboratory facilities and procedures were used throughout the training period. The tachistoscope was used by each person to develop quickness of perception and to increase the number of words perceived in a single "thought group." The tachistoscope is a slide projector with a time-control attachment that limits the time of an exposure on the screen. The time range of the exposure is from one second to one hundredth of a second. By practice the student reduces the time required to perceive the meaning of the group of words. For example, a student who perceives a phrase or sentence from three to six words in one second in the initial period of training learns by practice to perceive the same in one fiftieth or one hundredth of a second. He develops the habit of quick perception.

Each student used a reading pacer to develop continuity in quickness of perception. A reading pacer is a motorized gadget that moves a cover board downward over the page obscuring the lines from view of the reader as it moves. The rate at which the cover board moves is controlled by moving an adjustment device on the instrument. The student tries constantly to increase the rate at which the cover board obscures the page. Carefully prepared procedures are followed for checking comprehension several times each day.

One of the basic aims of such a course is to speed up thinking. More and more, rapid and accurate thinking is demanded of the management man. Since reading is a form of thinking, the course was directed toward bringing the rate of reading comprehension closer to the rate of thinking. It is generally accepted that practice in faster reading promotes the habit of faster thinking. Without exception, those taking the course were able to bring the rate of reading closer to the rate of thinking.

The fastest reading rate attained was 664 words per minute with a comprehension score of 87%. Three other students reached a top speed of more than 600 words per minute. The top reading rate for all students was 440 words per minute. This compares very favorably with the average beginning top rate of 225 words per minute.

Twenty-seven percent of the enrollees developed "supersonic reading rates". This is a rate of comprehension high enough to quiet the vocal chords, bring them to rest, and remove one of the chief obstacles to faster comprehension of the printed page. The vast majority of people tend to "say silently" the words read. This causes the vocal chords to be in constant motion in an attempt to produce orally the words being read. It puts the brakes on the mind of the readers. Since there is a limit to the rate at which the vocal chords can move, they are overcome and their obstructive action ceases when the reading rate reaches approximately 450 words per minute. After this rate is acquired, reading becomes easier and comprehension becomes greater.

The enrollees maintained a high level of interest throughout. Of the thirty-three initially enrolled, only four dropped, three of them for reasons beyond their control. Percentage of attendance was very high, with all absences being made up.

A big majority of the students believe that the increase in reading ability has definitely carried over into the job. They feel that they are able to discharge their responsibility more surely because they can acquire the necessary information much more readily and accurately.

This experiment at Convair seems to indicate that training in rapid reading may eventually be offered in industry generally as a substantial means of making one of the difficult phases of management's job simpler. Training in rapid reading can make a positive contribution to raising the level of the management man's effectiveness.

PART III

THIRD YEARBOOK 1954

READING---AN INNOVATION IN THE COLLEGE CURRICULUM

Ralph C. Staiger

Mississippi Southern College

There is no doubt that reading courses, as such, have not long been included in college curricula. The first successful reading program was described in the literature a scant thirty-one years ago. In 1922, C. W. Stone reported an experiment with five classes in educational psychology at the University of Illinois and ten classes at the University of Washington. This first course has developed into many programs in many colleges.

Historical Influences

It is significant that psychology students were the subjects of the first reported experiment. College reading courses have their origin in the relatively young science of psychology.

Psychologists, and not educators, were the forebears of our college reading specialists. Valentius' interest in the perceptual process in reading during the eighteen forties and Javal's later studies of eye movements in reading, were followed by the work of Cattell, Erdmann, Dodge, Huey, Dearborn and many others. They were psychologists, interested in the phenomena which accompany reading. Their investigations, however, did much to stimulate interest in the reading process.

It has been said that the most carefully studied individuals in the world are members of sophomore psychology classes. They are under constant surveillance, and are forever being used as subjects in one experiment or another. Frequent use of student subjects was made by the early investigators of reading. This custom also influenced college reading courses.

Miss Adelaide Abell, for instance, in 1894, reported experiments on the reading rate of forty Wellesley College girls. She found that on the whole swift reading saved time without necessarily decreasing comprehension. Likewise, Dr. V. O. Quantz tested the reading rate of fifty juniors and seniors of the University of Wisconsin, and drew conclusions about their performances.

The cumulative effect of these studies and many similar experiments, together with the nurturing influence of several new factors in college curricula and the college population, led to the final development of reading courses.

The curricular change which occurred at about the end of the nineteenth century was a shift in emphasis which had important consequences. The student had, in the past, been offered only one curriculum. From the establishment of Harvard College in 1636, the prescribed subjects offered were studied--from the same books--by every student. The subjects were usually philosophy, languages, literature, and mathematics. Only a limited amount of reading, from the prescribed textbooks, was necessary.

As the nineteenth century drew to a close, the curriculum was expanded to include a great number of additional subjects, often vocational in nature rather than cultural. All students could no longer read a limited number of books to earn their college degrees, but instead many books, in many areas, were expected to be read. Wide reading became necessary as reading demands were expanded with the curriculum.

At the same time, the college population was changing. Economic expansion and prosperity enabled new groups of students to enter college; not only prospective ministers and professional scholars entered academic halls. The vocational aspects of the new college curriculum were the result of pressure from this group of students. Their interests were not exclusively verbal and intellectual; although they were the cream of the American culture, the change in the culture was reflected in the colleges. This change continued, and during the nineteen thirties and forties gained tremendous momentum.

The colleges were no longer the privilege of the few; a college education became the right of any American.

As the college population changed and as the curriculum broadened to include many subjects and to require much reading on the part of college students, the need for reading improvement became evident. The work of the psychologists was put to use. Since the psychologists themselves were rarely interested in teaching reading improvement courses, this function was taken over by others, usually interested members of the English department or instructors in Education. Much later, guidance people entered the field, too. Sometimes the younger psychologists were pressed into service.

Changing Emphases

In 1909, F. M. McMurry published How to Study and Teaching How to Study. This book influenced many writers and teachers, and led to the development of courses in study methods. One point which McMurry made was that reading and study are considered synonymous by many people. He cited Dr. Lida B. Earhart's Study to show how woefully ignorant students were concerning methods of study, and his own experience with teachers who were similary ignorant. Present day instructors in college reading classes find that students still need help in study habits. The later nineteen twenties saw the publication of at least six books in this area, and many others were published and used, before and after this period. John Adams, in London, called his 1915 publication Making the Most of One's Mind, "A Guide for All Students". The obvious influence of psychologists can be noticed in these early publications, for there are chapters entitled "Manipulation of the Memory", "Nature of Study and Thinking", "The Nature of Reading".

Some of the other important books published during the nineteen twenties in this area were Bird's Effective Study Habits, Book's Learning How to Study and Work Effectively, Crawford's The Technique of Study, Headley's How to Study in College, and Yoakam's Reading and Study. Continuing interest in this area is evident from the publication of professional books at the high school level such as Brink's Directing Learning in the Secondary School, Frederick, Ragsdale, and Salisbury's Directing Learning, and Wooding and

Flemming's Directing Study of High School Pupils.

Many manuals and workbooks were also published. It is significant that in general, study manuals, unlike subject matter texts, retain their usefulness throughout the years. There are many ideas contained in McMurry's 1909 volume which can be put to profitable use by present-day students.

The first emphasis in college reading courses was on study skills and habits, for study and reading were considered synonymous. With further experience, reading separate from study took on more importance.

Reading comprehension was considered an important area in most of the study manuals, but with the development of standardized reading tests enabling objective measurement of comprehension abilities, and the emphasis on silent reading in the literature, improved reading comprehension became the goal of college reading courses. Study skills were still considered in most courses, but the emphasis shifted to the development of comprehension skills during the late nineteen-twenties and nineteen thirties.

Rate of reading investigations were conducted by psychologists many years ago. Some emphasis was placed on improving speed of reading in the early days of college reading through the study of eye movements, and by stressing the individual's need for exceeding his accustomed rate. The development of projection devices, however, greatly stimulated the emphasis on speed reading. The tachistoscope and the metronscope were used during the nineteen thirties in ever-increasing numbers. Their mechanical aspects interested some teachers and administrators; manufacturers' sales efforts stimulated their use. But it was learned that the machines' use alone was not enough to improve reading. Their use as a motivating device seemed to be most justifiable.

Films designed to increase reading rate and comprehension were the next development. It is significant that with both the Harvard and Iowa Reading Films, supplementary exercises were published. The film alone was not considered adequate.

Reading pacers have been the latest device developed to increase reading speed. The machines all utilize the same principle: the reader sets his machine for a certain speed, and a shutter device paces him. Some manufacturers use a metal shutter, some plastic, some bars of metal or plastic, and one merely a beam of light to stimulate the reader to increase his speed. The great advantage of these devices is that they are individual, and can be used with any reading material. In all cases, comprehension is also taken into consideration. Speed is not the only objective, for speed reading without comprehension is useless. The by-products of increasing rate of comprehension--overcoming word-by-word reading, plodding, and fear of missing something--are important. Recognition of the emotional aspects of reading therapy have been a recent development in reading programs. Close cooperation with student personnel services and psychological clinics appears to be coming into the picture. Beulah Ephron's book "The Emotional Aspects of Reading" lucidly describes this development.

Present Status

Reading instruction in our colleges is still in a state of flux. There are varying emphases in different institutions. In general, an eclectic attitude has been taken by college reading specialists, much the same as the eclectic attitude of reading teachers in the elementary and secondary schools. The best in every school of thought is used, in an attempt to create finer programs, to bring maximum results. Speed reading, study habits, comprehension skills, vocabulary development are included in modern reading courses.

Great strides were made during the nineteen-forties and fifties in terms of the number of college reading services made available. In many cases the need for these services was made evident by the influx of war veterans whose need for help was pressing and whose motivation was strong. The successful courses were not built in a day, however, nor are they secure in every college curriculum.

Changes have always been made in curricula in the face of bitter opposition by conservative staff members with subject-matter interests. Grudging support has sometimes been given reading courses, but often they have been scorned as a means of perpetuating the unfit in college. The unfairness of this criticism is easily seen by the proponents of reading courses, but it nevertheless remains, to be revived at intervals by disgruntled colleagues.

To remain in the curriculum, reading courses must overcome this attitude by producing results which will prove their usefulness. Fads and overmechanization must be avoided. The courses must continue to be established, so that college reading courses will take a permanent place in the college curriculum.

BIBLIOGRAPHY

Abell, Adelaide M. "Rapid Reading". Educational Review, 8, 282.

Adams, John. Making the Most of One's Mind. N. Y., George H. Doran Co., 1915.

Bird, C. Effective Study Habits. N. Y.: Century Company, 1931.

Book, William F. Learning How to Study and Work Effectively. N. Y.: Ginn and Company, 1926

Brink, William G. Directing Study Activities in Secondary Schools. Garden City: Doubleday Doran & Co., 1937.

Crawford, C. C. The Technique of Study. Boston: Houghton Mifflin, 1928. p. 353.

Earhart, L. B. Teaching Children to Study. Boston: Houghton Mifflin, 1909. p. 182

Ephron, Beulah, Emotional Difficulties in Reading. New York: The Julian Press, Inc., 1953.

Frederick, Robert W.: Ragsdale, Clarence E. and Salisbury, Rachel. Directing Learning. N. Y. Appleton Century-Crofts, 1938.

Headley, Leal A. Making the Most of Books. Chicago: American Library Association, 1932. p. 342.

Huey, Edmund Burke. The Psychology and Pedagogy of Reading. N. Y. : Macmillan, 1913.

McMurry, F. M. How to Study and Teaching How to Study. Boston: Houghton Mifflin Co., 1909.

Quantz, J. O. "Problems in the Psychology of Reading". Psychology Review Monograph Supplements. Vol. II, No. 1, December, 1897.

Stone, C. W. "Improving the Reading Ability of College Students". Journal of Educational Method. II (September--1922) 8-23.

Woodring, Maxie & Flemming, Cecile W. Directing Study of High School Pupils. N. Y.: Bureau of Publications Teachers College. Columbia University, 1935, vi-253.

Yoakam, G. A. Reading & Study. N. Y.: Macmillan, 1930.

AN EVALUATION OF THE TACHISTOSCOPE IN READING IMPROVEMENT PROGRAMS

Roy E. Sommerfeld

Oklahoma A. and M. College

This paper is based in part on research done at the University of Michigan in 1951 (32). Interest in the problem was aroused by a journal article which discussed the technique, developed by Dr. Samuel Renshaw of Ohio State University, for teaching faster reading by "training students' eyes to see better" (44, p. 20). This visual training, or perception training, is accomplished by exposing numbers containing from five to nine digits with a tachistoscope at speeds ranging from 1/10 to 1/100 second. Reading tests administered before and after a series of such training sessions are reported to show large, and in some instances even phenomenal, increases in reading speed with no loss in comprehension. In fact, an increase in comprehension also may be shown.

For example, Renshaw (27) reported that he trained three students for three thirty-minute periods per week over a period of eleven weeks, using only digits as tachistoscopic stimuli. As a result of this training, the average reading speed of the students increased from 547 words per minute to 1,137 words per minute on material selected from the Reader's Digest. On passages from a psychology textbook, the reading speed increased from 468 words per minute to 775 words per minute. Commenting on the above results, Renshaw stated that the "protocols of the students contain clear and unambiguous testimony to the fact that reading and understanding what was read was easier and surer" (27, p. 222).

In another instance, Renshaw reported a training program involving a group of executives at the Batelle Memorial Institute. This program consisted of two half-hour periods per week for fifteen weeks. Tachistoscopic materials consisted primarily of digits although some English words, Magyar words, and geometric forms were also used. Standardized reading tests administered before and after the training program showed that the average reading speed of the group had increased 27 percentile points. The average comprehension score for the group had increased 33 percentile points.

Using a similar program with a group of adults in an evening school class at Arlington, Renshaw (27) reported an average gain of 26 percentile points in speed and 33 percentile points in comprehension.

Renshaw's results suggest that there is a close relationship between the size of tachistoscopic span for digits and reading achievement. That is, if it is true that reading ability can be improved by training the individual to perceive and report longer and longer series of digits which are exposed for shorter and shorter periods of time, then it must follow that the size of the span for digits is directly related to reading ability. The study cited above (32) was begun to investigate this relationship--specifically, what is the relationship between tachistoscopic span for digits and reading ability.

The question might be asked: what does the ability to grasp unrelated digits have to do with reading ability? The cognitive processes involved in normal reading would seem to go far beyond the ability to perceive digits exposed in a tachistoscope. In any event, a study of the relationship between the size of the perception span for digits and reading ability offers a test of the intrinsic value of tachistoscopic technique. Such a critical investigation is necessary because commercial organizations are enthusiastically promoting tachistoscopic devices and materials for use in schools. Articles (18,33) have appeared which encourage the use of such apparatus in developmental and remedial reading programs. Many schools and colleges have purchased tachistoscopes and slide materials for their reading programs. Although many claims are being made for tachistoscopic training, there is no evidence of any scientific proof of the intrinsic value of such training.

Evidence Pertaining to the Question

Research related to this problem falls into the following categories: (1) investigations involving tests of tachistoscopic perception, (2) investigations of the effect of tachistoscopic training on the span of perception, (3) investigations of the effect of tachistoscopic training on reading achievement, and (4) investigations of the relationship between tachistoscopic span and reading ability.

Tests of Tachistoscopic Perception. These tests involve the use of a tachistoscope for exposing various stimuli and asking the subject to report what he saw. Tachistoscopic span of perception is generally determined in one of two ways. One method is to determine the length of the longest series of stimuli--letter, digits, words, symbols--which can be perceived and reported at a given exposure time. This has been referred to as the threshold span. A second method is to determine the number of stimuli which can be perceived and reported for a series which is larger than the subject can perceive as a whole unit in the given exposure time.

Another device which has been used to obtain a measure of eye span is the Ophthalmograph. This instrument is a binocular camera utilizing a moving film on which is recorded, by means of light reflected from the corneas of the eyes. the coordinated movements of the eyes which occur during reading. From the film records it is possible to obtain, by counting, the number of fixations or pauses in reading a line of print; the number of regressions or backward glances; and, since the film is moved by means of a constant-speed motor, it is also possible to determine the rate of reading. The number of words in the reading passage divided by the total number of fixations required to read the passage yields a measure of the span for words in normal reading, which Buswell (4) defined as the span of recognition. It has also been demonstrated (3) that eye-movement measures are valid tests of reading ability.

Tachistoscopic training and increases in the span of perception. A number of studies, including those by Whipple (42), Foster (14), Dallenbach (7,8,9), Gray (17), Renshaw (26,27), Seward (31), Dolch (13), Weber (39) (41), Holland (20), Root and Root (29), and Freeburne (15), have reported that practice in perceiving quick exposures will increase the *span of perception*, or, as it is sometimes called, the *span of apprehension*: terms which Tinker (37) treated as synonymous. Whipple (42) attributed the increases entirely to the fact that, with practice, the subjects become habituated to the experimental conditions. Dearborn and Anderson (11), however, concluded that although part of the increase is due to becoming accustomed to the novelty of reading from a tachistoscope, there also seems to be an improvement which represents a real change in habits of perception. Reports by Renshaw (25, 26, 27) and a number of advocates of his technique, including Root and Root (29), MacLatchy (21), Melcer and Brown (22), and Holland (20), give ardent support to the use of tachistoscopic methods for improving perception.

Tachistoscopic training and reading improvement. There have been a number of investigations of the effects of tachistoscopic training on subsequent performance in reading. In addition to the studies by Renshaw (27) cited earlier, the same Renshaw (26) reported a program involving first-grade pupils in the Gary, Indiana, school system. Experimental and control groups were set up on the basis of intelligence and socio-economic ratings. The experimental groups were three classes from three schools selected to represent high, medium, and low socio--economic levels. The three control groups came from comparable schools. The means and ranges of the intelligence ratings of the two classes from the two schools of comparable socio--economic level were reported as being closely similar.

The children in the experimental groups were given three twenty-minute periods of tachistoscopic training per week throughout the school year. Children in the control groups were reported to have been given exactly the same type instruction as the experimental groups except for the tachistoscopic training. They were, however, in different schools and under different teachers. As a result of this experiment, Renshaw concluded that:

> . . . the evidence . . . is clear and unambiguous:

> Children who have had adequate tachistoscopic training in the first grade read more fluently and understandingly, show distinctly greater skill in number work, exhibit greater range, quickness and accuracy in general observational noting, in art work, etc., than children of equal native ability, under teachers of equal competency in the same curriculum, who have not had this form of visual training. (26, p. 1).

From a closer inspection of the data presented, however, it appears that these claims are based on a comparison of the test scores of the *experimental* class from the *high* socio-economic school with the test scores made by the *control* class from the *medium* socio-economic school. An inspection of the mean intelligence ratings of these two groups shows a difference of 10.8 I. Q. points in favor of the high socio-economic experimental group. Renshaw apparently justifies such treatment of the data by the statement that "teaching in the Ambridge (high socio-economic control) group is rated as superior, and in the Edison (high socio-economic experimental) and Jefferson (medium socio-economic control) groups, as average" (26, p. 4). Such treatment of data would certainly raise serious questions concerning the valididty of the conclusions drawn from the data.

MacLatchy (21) describes a program using Renshaw's technique with a group of elementary school pupils at Bexley, Ohio. The program began with the first-grade pupils in 1944, and continued with the same group in the second grade in 1945. Scores on two reading tests given at the end of the first grade showed the average of the Bexley pupils to be approximately six months above their grade placement. At the end of the first semester of the second grade, scores on a reading test showed the Bexley average to be approximately seven months above their grade placement. At the end of the second grade, scores on two subtests of the Durrell-Sullivan Reading Achievement Test placed the Bexley average at six to eight months above their grade level. These "marked gains" in reading were attributed to tachistoscopic training. However, other techniques were also introduced into the reading program, and no attempt was made to show how much of the "gain" was due to tachistoscopic methods as compared with other innovations in the reading program.

Melcer and Brown (22) credited tachistoscopic methods with rapid gains in first-grade reading. Their study was conducted at the Danforth Elementary School in Texas City, Texas. While these authors made a pretense of setting up a control group, they actually did not have two equated groups. Among the grosser discrepancies was the fact that the experimental group contained forty-five Mexican children, most of whom spoke Spanish at home, and very few of whom could speak English before entering school; the remaining part of the experimental group consisted of thirty American children whose intelligence scores were "somewhat above average." The control group was made up entirely of American children, who for the most part, were "average or superior in intelligence," and "a few" of them were "inferior".
The experimental group was given tachistoscopic training beginning with geometric forms, going on to "extensive" training with digits, and some lessons on recognition of words and phrases. "Children who seemed to be having great difficulty were assembled in small groups and given special help and instruction" (22, p. 1218). At the end of the training period, the experimental group had made a gain in reading test scores of 16.45 points. The control group had made a gain of 12.65 points over the same period. No attempt was made to establish the significance of the difference in gain between the two groups. The authors concluded with the statement:

> It is hoped that this experiment will prove to be of some value in establishing the fact that the tachistoscopic training is unquestionably an invaluable aid in promoting good skills in many phases of work of the school curriculum (22, p. 1219).

The conclusions of the preceding studies seem to be based on the post hoc ergo propter hoc fallacy. There is also the unfortunate tendency to attribute all of the gains to a particular technique and to ignore other variables in the experimental situation.

Reference to these studies is included here not because of their contribution but to indicate the caliber of some of the material which gets into the literature.

Among the more objective studies, Sutherland (36) investigated the effect of tachistoscopic training on rate of reading. Her subjects were freshmen in remedial reading groups at the University of Iowa. The experimental group was given tachistoscopic training with words and phrases; a second experimental group was enrolled in a regular freshman reading class in which training centered around the Harvard Reading Films and the Wilking and Webster College Developmental Reading Manual (43); a third group served as controls. Following tachistoscopic training, the first experimental group was also enrolled in regular freshman reading classes at a higher level and made greater initial gains in reading achievement than did the second experimental group. By the end of the reading training, however, the former group had lost this advantage. Both experimental groups made reading test gains significant at the 1 per cent level of confidence, but the net gains of the group which went directly into the remedial reading program exceeded the net gains of the group which received the tachistoscopic training prior to the remedial program. It is unfortunate that a measure of comparison was not obtained between the reading ability of the first experimental group before quick-exposure training and the reading ability of the second group before beginning the remedial program. Although Sutherland concluded that perceptual spah training given before direct instruction in reading may facilitate the students' progress, the data reported do not necessarily substantiate such an inference.

An interesting outcome of Sutherland's (36) study was that the control group, which had received no special training of any type, also made gains significant at the 1 per cent level of confidence on one reading test and gains significant at the 10 per cent level on a second reading test. The implications of this finding will be considered later.

Weber (41) conducted a study involving two experimental groups and a control group at Wells College. His first experimental group was given tachistoscopic training beginning with presentations of nonsense forms and words and ending with complex sentences. His second experimental group worked under supervision with exercises from L. C. Pressey's manual of Reading Exercises for Freshmen (24). Following the training period, reading tests showed that there were no essential differences in the gains produced by the two experimental methods. A comparison of the scores made by the experimental groups with scores made by the control group showed that the former gained 12.1 per cent in comprehension while the latter gained 7.3 per cent. The experimental subjects gained 36.1 per cent in rate, while the control subjects gained 15.6 per cent.

Freeburne (15) also investigated the influence of tachistoscopic training on reading ability. His subjects were freshmen in the remedial reading program at the University of Iowa. Tachistoscopic training was given with words and phrases. Reading tests after the training period showed significant gains in reading ability for both the experimental and control groups. (It should be noted that Freeburne is among the few investigators who reports taking into consideration the effect of the regression phenomenon on test scores in a testretest situation with individuals at the extremes of a distribution. He reports that the mean gains were corrected for regression toward the population mean.) Analysis of his results showed that there was no significant difference between the mean gains of the experimental group and the mean gains of the control group.

As a part of Freeburne's (15) investigation, the initial and final tachistoscopic tests were administered to the control group. Freeburne attempts to explain the gains in reading made by the control group on the basis of the hypotheses that the training received by the control groups during the two administrations of the tachistoscopic test was sufficient to account for the significant (1 per cent level) gains in reading. It is difficult to understand how significant gains in reading ability can be attributed to training received from two such tachistoscopic tests administered at an interval of three weeks. There is basis for skepticism also in the fact that when Freeburne correlated tachistoscopic span scores with his various measures of reading ability, he found correlations ranging from .123 to .292. Only one of the coefficients was significant at the 1 per cent level of confidence. In spite of the statistical significance of this correlation, the question still remains as to whether or not this relationship is high enough to be held accountable for the gain in reading scores. Still further basis for skepticism is found in the correlations of the increases in perception span scores with the increases in reading scores. All were negative and ranged from -.051 to -.222. This finding certainly could be interpreted as evidence that gain in span is not closely related to gain in reading.

A number of service schools have instituted remedial reading programs in their officer-training courses. These programs generally consist of tachistoscopic training combined with paced reading practice with a reading rate controller. Such a reading program at the United States Air University (1) produced remarkable gains in reading rate without sacrificing comprehension. Materials exposed for quick perception training included digits, words, and phrases. Unfortunately, the relative contribution of the tachistoscopic exercises and practice with the rate controller was not investigated. Allen (2), however, reporting on a program at another service school, concluded that the use of the tachistoscope, when compared with other methods of supervised reading practice, was of little consequence.

Investigations of the relationship between tachistoscopic span and reading ability. A few investigators report having tested the relationship between perception span and measures of reading ability.

As mentioned earlier, Freeburne (15) correlated perception span scores with reading test scores. The coefficients ranged from .123 to .292. His tachistoscopic presentations consisted of words and phrases. As a part of another investigation, Buswell (6) flashed numbers ranging from three to nine digits and administered a rate of comprehension test. The correlation of .16 was reported between these two variables. Sutherland (36) found correlations ranging from .31 to .37 between tachistoscopic span for words and measures of reading rate.

To return now to the initial issue which prompted the current investigation. As a result of his own investigations and a review of selected investigations reported by others, Renshaw concluded that "tachistoscopic training with digits, if carried well toward the shoulder of the curve, will produce significant increases in reading comprehension and because of this, in speed" (27, p. 222). The conflicting conclusions drawn from the investigations reported above cannot be taken as conclusive evidence either to substantiate or to refute the rather extravagant claims made by Renshaw. Only the studies by Renshaw, himself, reported exclusive use of digits in the tachistoscopic training program. Further evidence was needed to clarify the relationships involved. Since many investigators use words and phrases for tachistoscopic training, it was also decided to investigate the relationship between tachistoscopic span for words and reading ability. In addition, the relationship between perception span and recognition span was included in the study.

The Study

The investigation was carried on during the summer and fall of 1951. Subjects of the investigation were ninety-seven volunteers from the elementary course in Educational Psychology at the University of Michigan.

Among other factors investigated, the following measures were obtained from each subject: two measures of tachistoscopic span for digits--(1) the threshold span and (2) the number of digits perceived when the stimulus series was greater than the threshold, referred to as the mean span for digits; tachistoscopic span for words; a rate of reading score obtained while the subjects were reading three 1,000-word passages from Strang's Study Type of Reading Exercises (34); the level-of comprehension score from the Cooperative English Test, Test C2; Reading Comprehension; and the speed of comprehension score from the same instrument. Photographic records of eye movements while the subjects read a passage of Grade XII difficulty yielded measures of the size of the fixations in normal reading and measures of rate of reading.

In order to test the relationships under consideration, Pearson productmoment correlations were run between the variables concerned.

Results

Table I shows the correlations between the measures of tachistoscopic span and recognition span. None of the coefficients achieves statistical significance at even the 5 per cent level. Thus, no apparent relationship was found between the size of the perception span and the size of the span used in normal reading--as measured by the techniques used in this investigation.

The correlation between tachistoscopic span for words and rate on the Strang passages is the only positive correlation to show statistical significance, and that is at the 5 per cent level. The correlation between mean span for digits and speed for comprehension is also significant at the 5 per cent level but the coefficient is negative.

Thus, these findings have not demonstrated that either tachistoscopic span for digits or tachistoscopic span for words as much in common with measures of rate and comprehension as measured by techniques used in this investigation with the population involved. In the absence of such evidence, it is difficult to see how tachistoscopic training can have much effect on reading performance.

Discussion of Results and Implications

There are a number of other facts which cast doubt on the intrinsic validity of tachistoscopic training. For one thing, many experimenters have demonstrated that the size of the tachistoscopic span for words greatly exceeds the size of the fixations in normal reading. Robinson (28) found that tachistoscopic span was more than twice as large as span in normal reading. Walker (36) supports this finding. Harris (19) found tachistoscopic span to be more than three times as large as span of recognition. In the present investigation, tachistoscopic span for words was 2.9 times as large as fixation span. These findings seem to

TABLE I

CORRELATIONS BETWEEN MEASURES OF TACHISTOSCOPIC SPAN AND RECOGNITION SPAN

Tachistoscopic Span	Recognition Span
Digits	
Threshold Span	.162
Mean Span	.027
Span for Words	.179

Table II shows the correlations between the measures of tachistoscopic span and measures of reading ability.

TABLE II

CORRELATIONS BETWEEN MEASURES OF TACHISTOSCOPIC SPAN AND MEASURES OF READING ABILITY

Tachistoscopic Span	Strang Passages	Eye Movement Passage	Comprehension	
			Level	Speed
Digits				
Threshold	.139	.073	-.035	-.031
Mean Span	.113	.125	-.182	-.210[b]
Span for Words	.213[b]	.055	.183	.084

[b] Indicates significance at the 5 per cent level of confidence.

indicate that rarely, if ever, does an individual even approach in his fixations in normal reading the size of his perceptual span in tachistoscopic reading. That is, normal readers already have a greater range of apprehension than they ordinarily use. If the total tachistoscopic span for words were used in reading, the average adult would require only two to four fixations to read an average line of print. However, investigations (33) have shown that average readers will make as many as six or eight fixations per line of reading. In fact, in a study of eye movements of superior readers, Walker (36) found an average of almost eight fixations per line. Dixon's (12) results are even more striking. He found that college professors averaged 8.56 fixations per line on the passage read before the eye-movement camera.

Further evidence on this point is to be found in the fact that, generally, an individual will read familiar material more rapidly than he will read unfamiliar or difficult material. It would seem that, in the case of reading the unfamiliar or difficult material, the eyes must, in effect, "mark time" while the mind is "catching up" with them or comprehending what the eyes are perceiving. This idea is borne out by Ruediger (30) who concluded that rate is, in the main, determined by the rapidity with which meaning is aroused after the words are seen. That is, it is not a matter of getting the material to the brain, but of assimilating it after it gets there.

Research by the Army Air Forces Aviation Psychology Program (16) has discredited the claims that tachistoscopic training with digits will increase the general efficiency of perception and widen the angle of vision. Their findings show that while digit training did lead to a significant improvement in digit scores, it did not improve the subjects' proficiency in recognizing aircraft. A more significant finding was that the results of quick-exposure training did not generalize to the extent of improving performance on the test of perceptual efficiency, the

Flexibility of Attention Test, CP 411E (16, pp. 82-86), employed in the investigation.

Since the completion of the study currently reported, Manolakos (23) has reported an experiment carried out at the Marine Corps Supply Schools. Although the number of subjects involved (thirty-four) was rather small, the results are interesting. The subjects, who were Marine Corps officers under instruction at the Supply Schools, were divided into two groups equated on the basis of age, intelligence test scores, initial reading rate, initial comprehension score, and educational level.

Both groups spent eighteen 25-minute training sessions on the Reading Rate Controller. The "Control" group had, in addition, eighteen 12½ minute training sessions with the tachistoscope using digits as stimuli, and also nine 12½ minute periods devoted to the development of vocabulary and an equal number of periods for the development of comprehension skills. Training for the "Experimental" group differed in that no tachistoscopic exercises were provided. The time allocated for such training in the control group was utilized in providing a "broader program of training in vocabulary and comprehension skills." (23, p.411)

At the end of the training period, Manolakes (23) found no significant differences between the groups in the reduction of the number of fixations, the increase of the span or recognition, or reduction of the duration of the fixations. There was a significant difference in reading rate, however, but this was in favor of the "experimental" group.

How, then, can the claims which are made for tachistoscopic training be reconciled with the above indictments? The answer probably is that the improvement which has been attributed to these methods is actually the result of certain secondary factors which are not inherent to the method.

It has been adequately demonstrated that gains in reading achievement can be obtained by many different types of training programs whether they involve quick-exposure training, pacing devices, exercises in interpretation, some special reading manual, or a how-to study program.

Investigations which have compared tachistoscopic training with other types of training programs have found no significant differences between the improvement in reading brought about by these methods. Quick-exposure training shows no superiority over any of the other methods. If the method employed in the reading program is not the determining factor in reading improvement, how, then, can the improvement be accounted for?

One suggestion that has been made is that many individuals adopt reading practices which are below their capabilities; that is, their reading performance is nowhere near their capacity. Weber (40) indicates that slow reading in the average adult bears all the familiar earmarks of habit. Buswell (5) feels that a narrow span of recognition becomes habitual with the reader and that the span is habitualized far below the reader's possibilities. If this concept of the cause of slow reading is true, then any pressure which tends to break down these inefficient habits could bring about an improvement in reading achievement. Thus, quick-exposure training may give the individual a mental set toward perceiving a larger unit in one glance than he has been accustomed to. Pacing devices may force higher levels of speed on readers who have become habituated to lower levels of performance than they are capable of attaining.

However, reading programs which make use of no mechanical devices produce gains in reading as large as, if not larger than, those programs which do use artificial devices. The answer to this quandary has been suggested by several authors, most notably Dearborn (10), who indicated that "motivation through the change of the set of mind or the intention of the learner is a more important factor in remedial reading than the particular methods and materials of instruction" (10, p. 1). Accordingly, "methods which are intrinsically not even sound or sane, may, because of the novelty of their appeal and their assurance of success, arouse the student to new hopes and efforts at improvement" (10, p. 1). Referring to perception-training devices, Dearborn says, "What these methods may do is increase perceptual span by offering the reader more motivation. That is, they succeed not by stretching the visual span but by spurring the mind" (10, p. 6). In other words, the motivation which is associated with almost any method that is tried may account for the resulting improvement as much as the method itself.

From the results of those studies which employed a control group, it can be inferred that much of the gains in reading achievement reported for the subjects in the reading programs can be attributed to factors other than the training because the untrained students also made significant gains in reading achievement. It would seem that the mere passage of academic time appears to account for some improvement in reading. There is a probability that, at the college level, the amount of reading material which the student is expected to cover in a given time is in itself a spur to higher levels of reading achievement than those to which the individual has become habituated.

The principal conclusion to be drawn from this investigation is that no significant relationship has been found between measures of tachistoscopic span and the measures of reading ability employed. It follows by implication that quick-exposure training, in and of itself, cannot influence the process of reading except as certain secondary factors, such as motivation, are involved.

BIBLIOGRAPHY

1. *Air University Reading Improvement Program*. Montgomery, Alabama: The Air University, Maxwell Air Force Base, 1948. P. 44.
2. Allen, M. Robert. "Are Remedial Reading Clinics Oversold?" *Army Information Digest*, V (May, 1950), 51-53.
3. Anderson, Irving H., and Morse, William C. "The Place of Instrumentation in the Reading Program: I. Evaluation of the Ophthalm-O-Graph," *Journal of Experimental Education*, XIV (March, 1946), 256-62.
4. Buswell, Guy T. *How Adults Read*. Supplementary Educational Monographs, No. 45. Chicago: University of Chicago Press, 1937. Pp. xiii + 158.
5. __________. *Remedial Reading at the College and Adult Levels*. Supplementary Educational Monographs, No. 50. Chicago: University of Chicago Press, 1939. Pp. xi + 72.
6. __________. "The Relationship between Rate of Think-

ing and Rate of Reading," *School Review*, LIX (September, 1951), 339-46.

7. Dallenbach, K. M. "The Effect of Practice upon Visual Apprehension in School Children, Part I," *Journal of Educational Psychology*, V (June, 1914) 321-34.

8. __________. "The Effect of Practice upon Visual Apprehension in School Children, Part II," *Journal of Educational Psychology*, V (September, 1914), 387-404.

9. __________. "The Effect of Practice upon Visual Apprehension in Feeble-Minded," *Journal of Educational Psychology*, X (February, 1919), 61-62.

10. Dearborn, Walter F. "Motivation versus 'Control' in Remedial Reading," *Education* LIX (September, 1938), 1-6.

11. Dearborn, Walter F. and Anderson, Irving H., "A New Method for Teaching Phrasing and for Increasing the Size of Reading Fixations," *Psychological Record*, I (December, 1937), 459-75.

12. Dixon, W. Robert. "Studies of the Eye Movements in Reading of University Professors and Graduate Students," Pp. 113-178 in *Studies in the Psychology of Reading*, Monographs in Education, No. 4. Ann Arbor, Michigan: University of Michigan Press, 1951.

13. Dolch, E. W. "Phrase Perception in Reading," *Elementary School Journal*, XLIX (February, 1949) 341-47.

14. Foster, W. S. "The Effect of Practice Upon Visualizing and Upon the Reproduction of Visual Impressionsm" *Journal of Educational Psychology*, II (January, 1911), 11-22.

15. Freeburne, Cecil Max. "Influence of Training in Perceptual Span and Perceptual Speed upon Reading Ability," *Journal of Educational Psychology*, XL (October, 1949), 321-52.

16. Gibson, James J., ed. *Motion Picture Testing and Research*. Army Air Forces Aviation Psychology Program Research Reports, No. 7, Washington, D. C.: Superintendent of Documents, U. S. Government Printing Office, 1947. Pp. xi + 267.

17. Gray, William S. "Diagnostic and Remedial Steps in Reading," *Journal of Educational Research*, IV (June, 1921), 1-15.

18. Hamilton, Bernice F. "The Flashmeter: An Instrument for Teaching Reading," Elementary English Review, XXIII (October, 1946), 272-75.
19. Harris, Theodore L. A Laboratory Study of the Relation of Selected Factors to the Span of Recognition in Silent Reading. Chicago: University of Chicago Press, 1941. Pp. x + 144.
20. Holland, A. C. "Speed Reading and Vision," Optometric Weekly, XLI (July 6, 1950), 1005-1006.
21. MacLatchy, Josephine H. "Bexley Reading Study," Educational Research Bulletin, XXV (September 18, 1946), 141-68.
22. Melcer, Fannie H., and Brown, Barbara G. "Tachistoscopic Training in the First Grade," Optometric Weekly XXXVI (December 6, 1945), 1217-19.
23. Manolakes, George. "The Effects of Tachistoscopic Training in an Adult Reading Program," Journal of Applied Psychology, XXXVI (December, 1952), 410-412.
24. Pressey, L. C. Manual of Reading Exercises for Freshmen. Columbus, Ohio: Ohio State University Press, 1936.
25. Renshaw, Samuel. "Tachistoscope in Visual Diagnosis and Training," Optometric Weekly, XXXVI, (November 29, 1945), 1189.
26. __________. "The Influence of Tachistoscopic Training at Far Point on the Scholastic Achievement of First Grade Children," Psychological Optics, VI, (November, 1945), 1-21.
27. __________. "The Visual Perception and Reproduction of Forms by Tachistoscopic Methods, " Journal of Psychology, XX (October, 1945), 217-32.
28. Robinson, Francis P. "The Tachistoscope as a Measure of Reading Perception," American Journal of Psychology, XLVI (January, 1934), 132-35.
29. Root, F. M., and Root, D. L. "Tachistoscopic Training in Schools," Optometric Weekly, XXXVIII (December 25, 1947), 1925-27.
30. Ruediger, William C., "The Field of Distinct Vision," Archives of Psychology, I, No. 5 (June, 1907),1-68.
31. Seward, John P., Jr. "The Effect of Practice on the Visual Perception of Form," Archives of Psychology,XX (May, 1931), 1-72.
32. Sommerfeld, Roy E. The Relationship of Reading Ability to Measures of Perceptual Span with Special Reference to Tachistoscopic Span for Digits. Doctor's

Dissertation, University of Michigan, Publication No. 3805). pp. v + 159.

33. Speer, George S. "Using Mechanical Devices Can Increase Speed of Reading,"" *Nation's Schools*, XLVIII (October, 1951), 45-48.

34. Strang, Ruth. *Study Type of Reading Exercises*. New York: Bureau of Publications, Teachers College, Columbia University, 1935. pp. viii + 112.

35. Stroud, J. B. "A Critical Note on Reading," *Psychological Bulletin*, XXXIV (March, 1942), 173-78.

36. Sutherland, Jean. "The Relationship between Perceptual Span and Rate of Reading," *Journal of Educational Psychology*, XXXVII (September, 1946), 373-80.

37. Tinker, Miles A. "Visual Apprehension and Perception in Reading, " *Psychological Bulletin*, XXVI, (April, 1929), 223-40.

38. Walker, Robert Y. "The Eye-Movements of Good Readers". pp. 95-117 in *Studies in Experimental and Theoretical Psychology*, University of Iowa Studies in Psychology, No. 17. Psychological Monographs, XLIV, No. 3. Princeton, New Jersey: Psychological Review Company, 1933.

39. Weber, C. O. "Effects of Practice on the Perceptual Span for Letters", *Journal of General Psychology*, XXVI (April, 1942), 347-51.

40. __________. "Reading Inadequacy as Habit," *Journal of Educational Psychology*, XL (November, 1949), 427-33.

41. __________. "The Acquisition and Retention of Reading Skills by College Freshmen," *Journal of Educational Psychology*, XXX (September, 1939), pp. 453-60.

42. Whipple, Guy Montrose. "The Effect of Practice upon the Range of Visual Attention and of Visual Apprehension," *Journal of Educational Psychology*, I (May, 1910), 249-62.

43. Wilking, S. V., and Webster, R. G. *College Developmental Reading Manual*. Boston: Houghton-Company, 1943. pp. ix + 363.

44. Wittels, David G. "You're Not as Smart as You Could Be," *Saturday Evening Post*, CCXX (April 17, 1948), 20, 21, 44, 47, 49, 50, and 52.

RECENT RESEARCH RELATIVE TO COLLEGE READING

Emery P. Bliesmer

University of Texas

With a few exceptions, the research reviewed in this paper has been limited to that found reported in the periodical literature since the last Southwest Reading Conference (44) and to that reported during 1952, which was not covered in the review of research presented at the last conference.

Results obtained in a number of reading improvement programs have been reported. Methods used in effecting improvement varied widely, both within and between programs, as did also methods used in measuring results and types of analyses of results made. Smith and Tate (42) found reading rate controllers settings, tests based on senior high school level materials, and Smith-Moler Test results all indicating substantial rate gains for a small group of University of Kansas students participating in at least 25 and up to 70 sessions. Tachistoscopic projectors and reading rate controllers were used in the program. Speed on the rate controller rose rapidly and did not appear to have reached a maximum for 2 subjects completing 70 sessions. Actual rates indicated by the tests, while substantial, were considerably lower than rates indicated by the controller; and gains indicated by the Smith-Moler Test were accompanied by some drop in comprehension. Students participating in a Northwestern University program used a great variety of procedures and materials (53). Substantial gains were indicated by Iowa Silent Reading Test total scores and, purportedly, comprehension scores also tended to improve. Average reading rates on relatively easy materials progressed from 272 to 474 words per minute. Purdue University's reading course for average and superior readers used Harvard Reading Films, the SRA accelerator, group and individual tachistoscopes, and a series of difficult readings in the field of science (13). Comparison of Diagnostic Reading Tests scores of 307 participating freshmen and a control group of

282 non-participants showed speed gains of 62 percent and 9 percent, respectively. The experimental group made small, but significant, gains in vocabulary and general comprehension also. Johnson (24) found that reading ability had improved to about the same extent when he compared results obtained with a group in which reading skills had been taught directly with those obtained with a group in which psychotherapy was considered only with reference to the psychology of learning.

A number of army and air force programs have also been reported. Locally constructed tests over material used in the 20-hour program reported by Staton and Maize (45) indicated gains for over 1800 Air Command and Staff School Officers, from a beginning average rate of 294 words per minute to 651 words per minute (122 percent gain), with comprehension progressing from a beginning 75 percent to 79 percent. The training sessions involved a short period of tachistoscopic recognition exercises, utilizing a reading rate controller before reading meaningful material which increased in difficulty as the course advanced. Changes, described by Jackson (22), made in the program the following year entailed greater emphasis on training in comprehension skills. Results obtained with *Harvard Reading Tests* (found more difficult than most of the materials used in the program) showed some rate gains, and some comprehension gains, for six groups participating in the revised program; but these gains were considerably less than the words-per-minute gains shown in the old program (when simple test measures were used). Because of data limitations, only "rough comparisons" were made of results obtained with the *Iowa Silent Reading Test* and locally-constructed rate-comprehension tests in the program of the Quartermaster School, Ft. Lee, Va. (1). Reading instruction consisted of three equal phases: reading rate controller exercises with recreational reading materials, tachistoscopic exercises, and use of a work manual and supplementary exercises for application of reading skills. Some gains, but rather moderate ones, were indicated. While scores of Advanced Officers receiving 29 hours of instruction were slightly higher than scores of Basic officers receiving only 19 hours, average increases offered little evidence of value received for extra time spent. Resulting revisions in the program included curtailing of time for tachistoscopic exercises, including such practice during the same period as rate controller practice, and providing additional time and materials for practical reading exercises. Gains made by a group in the revised 20 hour program were greater than those made in the old 29-hour program and were considered "quite impressive" in view of the lesser time involved for the former group.

The basic education program of the Army's Information and Education Center, Fort Lee, Va. was reported briefly by Miles (32). During an experimental period of approximately five and one-half months, 255 out of 391 recruits, who originally were unable to absorb military training because of inability to read and write English and to do simple arithmetical problems, were able to pass an U. S. Armed Forces elementary knowledge test after 25 days of 4 hour instruction each. Forty-two out of an additional 68 were able to pass the examination after an additional 100 hours of instruction.

Large groups of businessmen attracted to a reading program at the University of Pittsburgh were reported to have made unusual progress (8). Business clients at the Reading Laboratory of New York were reported to have been able to work at their own paces, with individual equipment, toward the goal of 600 to 700 words per minute, beginning with an average rate of 250-words per minute (8). Some were able to exceed the goal considerably, with a record of 3,750 reportedly being set by a Chicago lawyer. Reading efficiency classes for business men and industrial executives in the Detroit area met an hour and a half a week for 10 weeks and included regularly a reading speed check on a standard thousand-word exercise, discussion of a topic in the reading skill area, and 1 or 2 of the Harvard Reading Films. Results obtained with the Nelson-Denny Reading Test, Michigan Speed of Reading Test, and reading speed checks showed gains which were highly significant statistically.

In addition to use of standarized tests and other measures in evaluating programs, several studies of reactions of participants to programs were made. Questionnaire responses obtained in Kingston's Texas A and M program (25) revealed that, although 64 percent felt the course was too short to develop adequate reading skills, 97 percent felt it had helped them to improve basic reading skills and 86 percent thought they had been aided in studying assignments. Only 35 percent indicated that they did more recreational reading, although 64 percent indicated they enjoyed reading more than before. Students enrolled the following semester responded very similarly (44: 10-13). Eighty-four percent of the officers in the original Quartermaster School reading course felt greater reading ease and/or ability, according to Allen (1), 75 percent thought the course should be lengthened, and 81 percent considered the course as good or better than other subcourses taken. The favorable responses might be considered surprising in view of the relatively small gains made in the program. Questionaire responses of officers in the revised program were even more favorable. A slight majority (56 percent) of 118 randomly selected officers in the Air Command and Staff School program (45) ranked the course as highly effective only in increasing speed (the skill which received major emphasis). A considerable portion, larger than would be expected in view of test results, ranked the course moderately effective in aiding improvement in general areas of comprehension. Eighty percent of the Northwestern University students indicated their course had been of value in their college work (53).

Few specific attempts to determine the relative value or contributions of any of the various procedures employed were reported; but several studies have yielded suggestive indications. Sheldon (41) stated that none of the many varied techniques used in the Syracuse University reading course seemed appropriate or efficient when used alone, leading to an inference that improvement effected was perhaps due to varied techniques and procedures in combination.

Smith and Tate's study (42) was an attempt to determine amount of improvement which might accompany use of tachistoscopic projectors and reading rate controllers. Half the time of each session was devoted to work with each machine. While substantial improvement was indicated by the test used, these gains were not nearly as great as those indicated by rate controller settings. It was not possible to determine the relative contribution of each machine. Manolakes (30) studied the effects of tachistoscopic training upon reading improvement of matched experimental and control groups of Marine Corps Supply School officers. Training of the experimental group differed from that of the controls in that no tachistoscopic training was provided, though time allocated for this having been included in a broader vocabulary and comprehension program. Comparison of results of eye movement records after training showed no significant differences between the groups. Rate increase differences were significant, however, favoring the experimental group--the group without tachistoscopic training.

Kingston's students indicated, by questionnaire responses, that they felt the reading rate accelerator and the reading films had been most helpful (39 and 35 percent, respectively) and that the tachistoscope had been least helpful (41 percent) (25). It was pointed out that each technique had not been given equal emphasis. A Considerable portion of Quartermaster Officers rated, on questionnaires, the tachistoscope as being of least value also (1); manual practice exercises were rated as being of greatest value. This reaction, plus purported opinion in the field, led to previously noted revisions in which the tachistoscope phase was drastically reduced. Officers in the revised program reacted similarly. Questionnaire responses of Northwestern University students indicated that applying reading techniques to college materials, individual work with instructors, and vocabulary building activities had been most helpful (53). Tachistoscopic training, one of numerous activities in the program, was not regarded as having been particularly helpful.

Reasons for use of the rate controller for recognition exercises instead of the tachistoscope, which had been discontinued after having been used in the past, were not given by Staton and Maize (45). The last test of reading speed in the program they reported gave results which were 135 words per minute slower than test rate results obtained with the controller at the end of 16 periods. Smith and Tate (42) noted a similar lack of transfer and raised the question of the level to which speed and comprehension had been built.

Snyder (43) described the use of a Flashreader, a device which moves down a page and is "flipped" for each line by the reader. Several desirable results were claimed, but he presented no objective data. The chief value seems to lie in stimulation and maintenance of interest. The group tachistoscope, which had been used, did not appear to sustain the same interest. Possible motivational values of the tachistoscope have been noted frequently (1: 25; 54).

An attempt to improve reading speed and comprehension without "elaborate machines or expensive equipment" was described by Andrews (3). He reported that after two months of twice-a-week sessions of one-minute speed exercises with simple material, students read at rates varying from 250 to 1,000 words per minute. "Tests" were mentioned but not identified.

A number of reports dealt, in whole or in part, with varied types of analyses or descriptions of reading tests. Witty (54) called attention to limitations in tests of reading speed and comprehension, such as being limited to types of materials covered, inadequacy of length, limitations in measuring rate of reading validity, and lack of tests for measuring certain reading comprehension abilities. Traxler, in an earlier study (48) also pointed out the need for using care in test selection. In twenty-eight group silent reading tests yielding three or more scores, he found forty-nine types of reading ability covered, with twenty-three being included in only one test. One-fourth or more of the tests used subtests of word meaning or vocabulary, paragraph comprehension or meaning, sentence meaning, rate of reading, and story comprehension.

The *Diagnostic Reading Tests* have been involved in a number of analyses, as has also the *Cooperative English Examination, Test C2*. Two small books devoted to the construction, validation, interpretation and use of the *DRT* have been published (11; 12). None of the *DRT* Survey Section scores of 200 Hunter College Students were found to correlate as highly with an index in American History as did scores on the *Cooperative English Examination, Test C2* (4). All multiple correlations obtained when *ACE Psychological Examination* scores were combined with Test C2 scores were also higher than any obtained when ACE and DRT scores were combined. A combination of C2 vocabulary and comprehension scores correlated practically as highly with the history index as did a combination of ACE total score and Test C2 scores. Correlations obtained in a study with Michigan State College students indicated that the DRT and C2 were equally related to the ACE at a fairly high level, that Forms A and B of the DRT were comparable forms, and that the DRT and C2 were positively related but not sufficiently enough to be considered equivalent tests (23).

Witty, Stolarz, and Cooper (53) reported a correlation of .36 between scores of 114 students on the C2 and their scores on the Iowa Silent Reading Test, suggesting that the two tests might be measuring somewhat different phases of reading. The varying content of the tests as well as the select nature of the group (the C2 scores were among the lowest 15 percent among the scores of entering freshmen) might have been important factors in the relatively low relationship. Traxler (49) reported that the C2 "is without doubt sufficiently difficult for even very able graduate students."

In a study by Frederiksen (20), one group of Princeton freshmen was given the C2 under conditions of standard timing and directions; the other with separate timing of Part I (Vocabulary) and Part II (Reading) with Part II not being begun until time for Part I had been called. It was found that separate timing produced no significant changes in means and standard deviations of test scores, in predictive value of scores, in the intercorrelations of scores, or in their correlations with other predictive measures. Modifying the instructions for Part II by having students read the item questions before reading the selections also failed to produce significant differences. These findings seemed to warrant permitting administration of the test to remain simple.

Preston and Botel (36) obtained a significant correlation of .48 when rate and comprehension scores on the Iowa Silent Reading Test were obtained under the standard timed conditions. Without time limits, a non-significant correlation of .20 was found, leading them to conclude that under untimed conditions rate and comprehension are relatively independent of one another. When DRT vocabulary test scores obtained under timed and untimed conditions were compared, a correlation of .66 was found; but they considered this relationship too low for predictive purposes and regarded the timed test as practically a different test from the untimed one.

Several reported programs used the Harvard Reading Tests. These tests were considered more difficult in the Purdue Program (13) than the DRT; but a greater percent of increase in speed was indicated with the Harvard Reading Tests than with the DRT. However, use of the Harvard Reading Tests in the Air Command and Staff School reading program gave indications of smaller rate gains than had been indicated for most officers with previously administered tests which involved less difficult materials (22).

Three reading tests were included among the tests to which Forbes (19) applied five different readability formulas. The average grade placement levels obtained with the five formulas were middle-eleventh grade for the Cooperative English Examination, Test C2, and the Minnesota Speed of Reading Test and middle-tenth-grade for the C2, and high-ninth-grade for the SRA Test. The grade placement estimates obtained with the other five formulas yielded ranges of five to seven grade levels for each test.

Smith and Tate (42) used the Smith-Moler Test of Reading Efficiency as one of the measures of improvement used in their reading program. The test measures reading rate and comprehension on selections of three levels of difficulty (seventh grade, college freshmen, and college graduate levels). It has not yet been published. Nichols and Keller (34) reported the development of the Listening Efficiency Test which was used to measure improvement in listening skills attained in communication courses. Comparison of trained and untrained groups provided evidence that listening skills were readily amenable to training. They also used one form of the Purdue Placement Test in English, Part V, in the regular manner as a reading test and another form as a listening test by having examiners read selections and items. All reading-listening correlations were significant, the highest being in the reading-emphasis section. The greatest mean difference, a significant one, was found in the listening emphasis section.

Carillo and Sheldon (9) have suggested a tentative design for a test which provides for a natural reading situation and which measures the flexibility of approach to different reading situations.

Hall (21) found that over half of a group of students tested with the Nelson Silent Reading Test showed an increase in scores when background music was used. The major source of increase was in accuracy, and students of below average intelligence and achievement benefitted the most. General student reaction to background music was favorable.

Readability has continued to receive considerable attention. Klare (27) concluded, as the result of an extensive evaluation of five readability formulas, that the Gray-Leary, Flesch, and Dale-Schall formulas measured much the same aspects of readability, with differences between the three being slight. He attributed differences in ratings to differences between tests on which the formulas were based and to particular limitations of the formulas themselves rather than to difficulty of materials measured or sampling errors. The meaning of grade ratings for adult materials was questioned.

The five different formulas Forbes (19) applied to twenty-seven selected tests commonly used for counseling purposes were found to be correlated significantly, (the rank-order correlations among the Dale-Schall, Flesch, and Lorge being the highest, those involving the Lewrenz and Yoakam being among the lowest); but definite differences in results for the various tests by the five formulas were noted (as much as 9.1 grades between ratings determined for a single test by two formulas). Forbes presented a simplified formula which bases vocabulary difficulty on weights assigned to words in the Thorndike Junior Century Dictionary (1942 rev. ed.) and which requires only half an hour to apply to a test.

Quantitative results obtained by Russel and Fea (38) in their analysis of six formulas suggested that the Dale-Schall, Flesch, and Lorge formulas were about equally good measures of difficulty of children's books, in view of the ratings given twelve selected books by 63 librarians. Correlations based on the limited samples suggested, however, that the Flesch formula did not usually give books the same comparative rating as the other two and that the Winnetka formula rated them much as did the Dale-Schall, only at a level two grades higher.

Swanson and Fox (46), studying the effect of "easier and harder" versions of twelve articles printed in a company newspaper, found no significant differences in retention; however, they did find significant differences in comprehension. Results obtained suggested motivational factors inherent in content might be the most crucial factor where individuals select what they want to read and learn; but where individuals are required to read and study, as in classroom and training situations.

Maloney (29) found the directions and items in File's How Supervise?, a test of supervisory quality, to be at the difficult level (Flesch formula). He concluded that the test could be read only with difficulty by the average foreman and therefore, was of doubtful validity as a measure of supervisory ability for lower level personnel.

Witherington (52), applying the Dale-Schall formula to eight recently published educational psychology textbooks, found them to range from tenth to twelfth grade level in difficulty and concluded that all were appropriate, in view of readability, for the types of classes for which intended. Allen (2) found that oral commentaries of factual instructional films written one grade level below the present grade placement of sixth grade pupils resulted in significantly greater learning than did commentaries written one grade level above. The Flesch, Dale-Schall, and Lorge formulas were about equal in predicting comparative readability of commentaries; but the Lorge consistently predicted about two grades lower than the Flesch and the Dale-Schall varied in its prediction.

England, Thomas, and Paterson (16) reported a study of reliability of the original Flesch formula and the simplified Flesch formula whixh had been proposed earlier by Farr, Jenkins, and Paterson (17) and had been criticized by Klare (26) and Flesch (18).

Reading ease scores computed by 14 relatively inexperienced analysts and an experienced analyst yielded results which confirmed earlier reliability studies and showed that both the original and simplified Flesch reading ease formulas were highly reliable. Dunnette and Maloney (15) found that the simplified formula could be applied by naive subjects with a greater degree of accuracy and in less time. They concluded, therefore, that it was truly a simplified formula operationally.

A number of studies were concerned with various reading abilities and characteristics. Krise (28) investigated the relations between reversal tendencies and each of a number of factors which have been posited as causal factors. A highly significant correlation (1 percent level) was found for space relations ability, lending support to the theory that difficulties in space relations, or confusions in figure-and-ground relations, give rise to reversals in reading. In a study by Triggs (50), ability to divide words into syllables showed some growth from Grade 6 through the college freshman level, but Triggs found very little growth evident on ability to hear and match sounds from Grades 6 through 13. Schubert (40) has 26 Los Angeles State College retarded readers take two forms of the vocabulary test of the California Reading Test to measure reading and hearing vocabulary. One form was given as a reading test, the other as a hearing test. She found no significant differences between the two mean scores.

Menon and Patel (31) found that test results indicated slow reading rates for 70 teachers in training at a secondary teachers college. A slight negative correlation between rate and comprehension was found for the group; but it was reported that good readers were never slow and fast readers were never poor. Thirty college students in a study reported by Perry (35) were found to read Arabic numerals significantly faster and with significantly greater accuracy than they read Roman numerals. Tinker (47) found the influence of small type, vibrations, and use of italics to be cumulative and to produce relatively large drop in speed of perception.

Using a questionnaire approved, Schubert (39) attempted to ascertain factors which might differentiate poor college readers from good ones. Fifty retarded readers and 50 unselected cases of the same sex and grade status were sampled. Poor study habits were indicated for the retarded readers. Items which seemed contingent upon emotional factors (such as nervousness in class discussion, oral reading, and taking examinations) were experienced more often by them also. The investigation revealed, however, the possibility that apparent causes of reading retardation might be results of the condition. A group of Northwestern University upperclass students participating in the reading improvement program (53), while not seriously retarded according to test norms, exhibited relative inflexibility in rate, lack of various critical comprehension abilities, and lack of ability to concentrate and to sustain effort upon difficult materials. Smith and Tate (42) used *Minnesota Multiphasic Personality Inventory* results in comparing the 4 students making the greatest and the 4 making the least gain on the reading rate controller. The least gain group appeared to have more emotional distractions--greater anxiety, psychasthenic behavior, and tendencies toward paranoia; but the very few numbers of cases did not warrant any definite conclusions.

Dowd (14), studying the best and poorest achievers among those in the highest decile of the *ACE Psychological Examination*, found differences between groups on reading ability existed on a relatively high level. Generally, students in both groups were in the upper half of the class on reading level; but a large proportion of non-achievers fell just above the mean while most of the achievers fell in the highest range of scores. Dowd concluded that specific impingements of the college situation were not responsible for under-achievement in high capacity students but that factors operating to lower academic efficiency had also operated to depress the same in the earlier school environment. Bond (17), studying disparity between capacity and achievement among senior high school students, found high ability pupils indicating not only the tendency to spend a disproportionate amount of time on courses liked best as an important obstacle, but also poor study habits developed in lower grades when success came easily. Carter and McGinnis(10), comparing the 100 freshmen having the highest point-hour ratios and the 100 having the lowest, predicted that one apt to become a superior student would

would have, among other things, a reading test score in the upper quartile and would claim to have read five books and six periodicals during her senior year in high school. One apt to become an inferior student would have, among other things, a ranking in the lower third on reading test score and would claim to have read three books and five periodicals during his senior year.

Only one reported investigation of the effects of a reading program upon academic achievement was found. Mouly (33) agreed with Robinson (37), cited and discussed in the review of research last year (6), that the final criterion for the success of a remedial reading program is the improvement of the academic grades. He compared honor-point ratios of 106 students who had successfully completed a course in remedial reading with the ratios of a control group of 164 students who had scored equally low on the initial test but who had not taken the course. He found significant differences favoring the reading group and concluded that improvement in academic grades could result for those who took a reading course seriously. At the University of Florida, correlations between examination grades in a course based on efficient reading and grades in other subjects have ranged from .47 to .83 for over 15 years, with every correlation except two having been higher than .55 (51:v). While this is not an indication of the direct effect of the reading program upon academic achievement, it was considered as indicative of the increased chances for success in academic work for one who improves his reading ability. Witty (54) pointed out that perhaps improvement in grades in a particular subject should be anticipated only when reading skills necessary for that subject are emphasized in the reading program. Kingston (25) made a similar suggestion with respect of increase in recreational reading.

No study found reported involved any direct attempt to check permanency of gains; and only two reports gave stated recognition to the value of checking such (5: 22). Perhaps the studies concerned with effects of reading programs upon academic achievement can be considered indicative of some degree of permanency of gains.

It may be of interest to note that, as far as could be determined, only two of the reading programs discussed in this paper entailed voluntary participation (45:53). Staton and Maize (45), considered the reading program participants of the Air Command and Staff School to be a highly motivated group, because although committment to the program was voluntary, once committed, students were not permitted to withdraw. Out of 96 Northwestern University students strongly urged to avail themselves of reading service because of low scores on two reading tests, less than half chose to enroll for the work. (53). Comparisons of 180 students comprising the lowest 15 percent on a reading comprehension test, 114 students who had followed the suggestion to take a second reading test, and 42 students who participated in the reading course showed that the last two groups were quite similar to the first group in terms of average scenes and variability on the first reading test. This suggested that putting the second test on a voluntary basis may have resulted in eliminating many students who needed help greatly. Although enrollment in the reading program at the University of Miami was compulsory for students scoring below a certain point on a reading test, a "substantial number" who were scheduled to take the course failed to register for it; and not all who took it completed it successfully (33). It was suggested that difference in personality characteristics, if any, between those taking the "required" course and those who, although required to take the course, intentionally or unintentionally avoided doing so might be an important unknown factor. It was also suggested that this might be a disturbing factor in voluntary programs.

BIBLIOGRAPHY

1. Allen, M. Robert, "Adult Reading Improvement at an Army Service School," School and Society, 74: 72-76, August 4, 1951.
2. Allen, William, "Readability of Instructional Film Commentary," Journal of Applied Psychology, 36: 164-68, June, 1952.
3. Andrews, Joe W., "An Approach to Speed of Reading", English Journal, 41: 352-56, September, 1952.

Barrett, Dorothy M. "Correlation of Survey Section of Diagnostic Reading Tests and of Test C2: Reading Comprehension with College History Grades," *Journal of Educational Research*, 46: 465-69, February, 1953.

5. Bellows, C. S., and Rush, C. H. Jr., "Reading Abilities of Business Executives," *Journal of Applied Psychology*, 36: 1-4, February, 1952.

6. Bliesmer, Emery P., "Recent Research in Reading on the College Level," in Southwest Reading Conference for Colleges and Universities, *1952* Yearbook, Texas Christian University Press, Fort Worth, Texas, February, 1953, 1-10.

7. Bond, J. A., "Analysis of Factors Adversely Affecting Scholarship of High School Pupils," *Journal of Educational Research*, 46: 1-15, 1952.

8. *Business Week*, "Fast Reading Courses Take Executives Back to School," April 5, 1952, 78-80.

9. Carillo, Lawrence W., and Sheldon, William D., "The Flexibility of Reading Rate," *Journal of Educational Psychology*, 43: 299-305, May, 1952.

10. Carter, Homer L. J., and McGinnis, Dorothy J., "Some Factors Which Differentiate College Freshmen Having Lowest and Highest Point-Hour Ratios," *Journal of Educational Research*, 46: 219-26, November, 1952.

11. Committee on Diagnostic Reading Tests, *Diagnostic Reading Tests: A History of Their Construction and Validation,* Committee on Diagnostic Reading Tests, New York, 1952, p. 56.

12. Committee on Diagnostic Reading Tests, *Diagnostic Reading Tests: Their Interpretation and Use in the Teaching of Reading*, Committee on Diagnostic Reading Tests, New York, 1952, p. 42.

13. Cosper, Russell, and Mills, Barriss, "Developmental Reading at Purdue," *Journal of Higher Education*, 24: 258-62, May, 1953.

14. Dowd, Robert J., "Underachieveing Students of High Capacity," *Journal of Higher Education*, 23: 327- 1952.

15. Dunnette, Marvin D., and Maloney, Paul W., "Factorial Analysis of the Original and the Simplified Flesch Reading Ease Formulas," *Journal of Applied Psychology*, 37: 107-110, April, 1953.

16. England, George W., Thomas, Margaret, and Paterson, Donald F., "Reliability of the Original and Simpli-

fied Flesch Reading Ease Formulas," Journal of Applied Psychology, 37: 111-13, April, 1953.

17. Farr, James N., Jenkins, James J., and Paterson, Donald G., "Simplification of the Flesch Reading Ease Formula," Journal of Applied Psychology, 35: 333-37, October, 1951.

18. Flesch, Rudolph, "Reply to Simplification of Flesch Reading Ease Formula'", Journal of Applied Psychology, 36: 54, February, 1952.

19. Forbes, Fritz W., and Cottle, William C., "A New Method for Determining Readability of Standardized Tests," Journal of Applied Psychology, 37: 185-90, June, 1953.

20. Frederiksen, Norman, "The Influence of Timing and Instructions on Cooperative Reading Test Scores." Educational and Psychological Measurement, 12: 598-607, Winter, 1952.

21. Hall, Jody C., "The Effect of Background Music on the Reading Comprehension of 278 8th and 9th Grade Students," Journal of Educational Research, 45: 451-58, 1952.

22. Jackson, James L, "A Progress Report on the Reading Laboratory at the Air Command and Staff School," School and Society, 78: 8-9, July 11, 1953.

23. Jackson, Robert, "A Comparison of Diagnostic Reading Tests with Certain Other Criteria," Educational and Psychological Measurement, 11: 603-04, Winter, 1951.

24. Johnson, Granville B., "A Comparison of Two Techniques for the Improvement of Reading Skills at the College Level" Journal of Educational Research, 46: 193-205, 1953.

25. Kingston, Albert J., Jr., "Student Reaction to a College Reading Improvement Program," Junior College Journal, 23; 98-101, October, 1952. (See also Southwest Reading Conference for Colleges and Universities, 1952 Yearbook, Texas Christian University Press, Fort Worth, Texas, February, 1953, 10-13.

26. Klare, George R., "Measures of the Readability of Written Communication: An Evaluation, " Journal of Applied Psychology, 36: 53, February, 1952.

27. Klare, George R., "Measures of the Readability of Written Communication: An Evaluation,"

Journal of Educational Psychology, 43: 385-99, November, 1952.

28. Krise, Morley, "An Experimental Investigation of Theories of Reversals in Reading," *Journal of Educational Psychology,* 43: 408-22.
29. Maloney, Paul W., "Reading Ease Scores for File's How Supervise?" *Journal of Applied Psychology,* 36: 225-27, August, 1952.
30. Manolakes, George, "The Effects of Tachistoscopic Training in an Adult Reading Program," *Journal of Applied Psychology,* 36: 410-12, December, 1952.
31. Menon, T. K., and Patel, A. S., "Relation of Reading to Comprehension," Indiana Journal of Psychology, 26: 45-53, 1951.
32. Miles, James S., "The Three R's in the Army" *School and Society,* 76: 348-9, November 29, 1952.
33. Mouly, George J., "Effects of a Remedial Reading Program on Academic Grades at the College Level," *Journal of Educational Psychology,* 43 459-66, December, 1952.
34. Nichols, Ralph, and Keller, Robert J., "The Measurement of Communication Skills," *Junior College Journal*, 23: 160-68, November, 1953.
35. Perry, Dallis K., "Speed and Accuracy of Reading Arabic and Roman Numerals," *Journal of Applied Psychology,* 36: 346, 47, October, 1952.
36. Preston, Ralph C., and Botel, Morton, "Reading Comprehension Tested Under Timed and Untimed Conditions," *School and Society,* 74: 71, August 4, 1951.
37. Robinson, Harvey A., "A Note on the Evaluation of College Remedial Reading Courses" *Journal of Educational Psychology,* 41: 83-96, February, 1950.
38. Russell, David H., and Fea, Henry R., "Validity of Six Readability Formulas as Measures of Juvenile Fiction, " *Elementary School Journal,* 52: 136-44, November, 1951.
39. Schubert, Delwyn L., "A Comparative Study of Retarded and Unselected College Readers with Respect to Certain Study Habits, Attitudes, and Personality Traits", *Journal of Educational Research,* 46: 471-74, February, 1953.
40. Schubert, Delwyn G. "A Comparative Study of the Hearing and Reading Vocabularies of Retarded College Readers," *Journal of Educational Research,* 46: 555-58, March, 1953.

41. Sheldon, William D., "A Course in Reading and Study Skills," Journal of Higher Education, 23: 44-46, January, 1952.

42. Smith, Henry P., and Tate, Theodore R., "Improvements of Reading Rate and Comprehension of Subjects Training With the Tachistoscope," Journal of Educational Psychology, 44: 176-84, March, 1953.

43. Snyder, Allen, "The Flashreader in the Reading Laboratory," English Journal, 41: 269, May, 1952.

44. Southwest Reading Conference for Colleges and Universities, 1952 Yearbook, Improving Reading Programs for College Students and Adults, Texas Christian University Press, Fort Worth, Texas, February, 1953.

45. Staton, Thomas F., and Maize, Ray C., "A Voluntary Reading Improvement Program for Air Force Officers," School and Society, 76: 42-44, July 19, 1952.

46. Swanson, Charles E., and Fox, Harland G., Validity of Readability Formulas," Journal of Applied Psychology, 37: 114-18, April, 1953.

47. Tinker, Miles A., "Effect of Vibration Upon Speed of Perception While Reading Six Point Print," Journal of Educational Research, 46: 459-64, February, 1953.

48. Traxler, Arthur E., "Critical Survey of Tests for Identifying Difficulties in Interpreting What is Read," Supplementary Educational Monographs, No. 74, University of Chicago Press, Chicago, 1951, pp. 195-200.

49. Traxler, Arthur E., "Tests for Graduate Students," Journal of Higher Education, 23: 473-82, 502, December, 1952.

50. Triggs, Frances O., " The Development of Measured Word Recognition Skills, Grade Four Through the College Freshman Year," Educational and Psychological Measurement, 12: 345-49, 1952.

51. Wise, J. Hooper; Congleton, J. E.; Morris, Alton C.; Exercise Manual for the Meaning in Reading, Third Edition, Harcourt, Brace and Co., 1953.

52. Witherington, H. Carl, "Readability of Textbooks in Educational Psychology," Journal of Educational

Research, 46: 227-30, November, 1952.

3. Witty, Paul A., Stolarz, Theodore, and Cooper, William, "Some Results of A Remedial Reading Program for College Students," School and Society, 76: 376-80, December, 1952.

4. Witty, Paul, " Problems in the Improvement and Measurement of Growth in Reading," School and Society, 78: 69-73, September 5, 1953.

EMOTIONAL PROBLEMS IN READING

Elsie Dotson

University of Texas

The things that I'm going to say to you now are not the results or conclusions of a scientifically controlled study - nor or they hypothesis in a theoretical frame that I am developing. Rather I plan to talk with you about some of my thinking concerning reading as a form of behavior, and how and why some of our own life needs and defenses are acted out in this particular act. Naturally, what I think and say is a result of observations made while working in the reading program at the University, and I'm sure that some of the things I hypothesize and feel now will change in time; some will be modified and part of my present thinking will become more firmly fixed. So you cannot expect to hear a theoretical treatise, rather, (if I were not afraid of digressing), I would just like to talk with you about the college student and his reading. I am sure you all have observed the same things that I have, and have had similar thoughts and questions; so this will just be a mulling over of our mutual concerns.

I work only with people in college and this is a select group. My observations are made on this group and it is about this group that I think and am talking today. I do not mean specifically to imply that other groups may not be similar - just that I do not know other groups as well.

When we talk about emotional problems in reading, we are not talking about anything unique- anything that goes in a category all by itself. Firstly, reading cannot be regarded as separate and apart from other behavior. In the college student, reading is as much a part of his life as most anything else. He reads to learn, to recreate, to kill time, to compete, to please someone else, to win respect, to escape from reality,-- in fact, he reads for almost the same reasons he does a lot of other things. Reading is just one of his many natural everyday activities.

And what is true of our other behavior is true of reading.

We express in our walk much about ourselves. Our eating habits say much about us - our sleeping habits, the way we write, the way we talk, the way we read. This is our life - our own unique way of living; our needs, defenses, fears, aspirations can all make themselves partly known in many of these everyday activities. All of these things we acquire to adjust to life.

Let us examine a little more closely this particular act of reading -- how intimately it is a part of our life -- it is us; we read, it is not just reading.

Let us look at how integrated and everydayish reading is in our total lives. As a small child we see others read - our parents. This they can do and we cannot. What do they do with this achievement that we don't have? Share it with us, indicate to us that reading is fun. Do they express annoyance when we want to be read to? Many of our feelings about reading are acquired at this stage.

Then when we begin school, we are subject to a whole variety of feelings about reading -- the feelings of parents about our reading, our teacher's feelings about it, and our classmates--naturally, we are feeling and reacting, changing and acquiring feelings about our reading too.

We find in school that nearly every subject we study has to be read about. For those courses we don't like, it is a task; for those we do, it is a pleasure. By now books have assumed a subtle "have to" quality. Books are also, or may be, part of our concept of authority--if the book says it, it's right; and as such, our total feelings of authority may cover our feelings toward books.

Reading becomes a way of recreating, a way of satisfying our curiousity; it can be, and frequently is, a sort of substitute fantasy life. Many pre-adolescents and early adolescents read avidly--they are vicariously exploring life through this medium.

Then to college with all the multiplicity of reading requirements and experiences it holds.

So you see, reading is just another facet of our lives. And since it is just another aspect of our lives, we are learning about living and living in our experiences with it. Many of the world's demands can be met only by reading; we must read to pass our school courses, memorize a poem for an English course, study our Sunday School lesson, study our biology if we want to be a doctor, study hard if we want to do as well as an older brother. Naturally, how we feel about these demands can effect how we read. If we are anxious to please the world, we could become vociferous readers; if we resent the demands we may resent reading; if we are afraid of the demands, we may be afraid of reading; if we rebel against these demands, we may refuse to read. The way we feel about the requirements of our environment may become the way we feel about reading. In fact, we eventually may think we only feel this way about reading and not about the demands at all.

We have learned that not only are many of the world's demands to be met through reading but that some of our demands can also be met through reading. Can we get approved by reading? Is erudition a means of gaining social prestige? Can we dominate through reading attainments? Can we express our resentment by refusing to read? Can books serve as ready-made day dreams to satisfy our needs?

So you see, through this form of behavior known as reading we learn about the demands of our culture, the folks who people it, and about ourselves. When we are reading, we are reading.

Now, let us look at some of the attitudes that we sometimes see acted out in reading--some of these feelings that may interfere with reading efficiency, and some of the ways they may manifest themselves.

There is the often-seen word for word reader--many times fears or anxieties are found to be back of his approach to the printed page. As you all know, the word for word reader will soon tell you that he is afraid he will miss something--that is why he reads each word. What is so awful about missing something? Perhaps nothing, if missing something means only that to you--but if one error calls up all your fears of inadequacy, then one error is quite frightening. Let me give you an analogy: Suppose after you go to bed at night you hear a floor board pop. Well, you can understand that it is just a board popping as the house cools off. However, suppose you were reading a particularly exciting murder mystery before you turned out the light--then you hear the floor board pop. After just reading the murder mystery, all of your fears about life, death, and aggression are apt to be a little closer to awareness, and the sound takes on meaning in terms of these feelings and can give you quite a scare. Disproportionate to be sure--that is if you were just reacting to the cooling house. But you were not, you were reacting to a lot of fears that had momentarily been stirred up. And that is the way some readers react to an error; they are not reacting just to the error but to the threat the error carries with it--fears of total failure, inadequacy and helplessness.

Another possible factor in word for word reading is preoccupation. This is something all of us have experienced. We will be concerned about something, find it difficult to concentrate, and in an effort to force ourselves to attend to the reading matter we will literally read each word. Sometimes it happens that a person is very much involved with a problem--one which he may not be fully aware that he is constantly trying to solve. But as a result he has to force himself to attend to each word. It is as though his attention span is only one word long.

Another possible reading difficulty that could result from preoccupation could be the inability to attend to details in reading. The person may complain that he can get the main idea but that he can't make himself get all the details. He may even argue that details are unnecessary. Usually these people are spending most of their mental energy in the solution or the repression of some emotional problems and have very little energy left with which to cope with details.

Then there are people who are afraid to try to understand--to try and to fail would mean to be a failure. Better not to try and to continue believing that if he did try, he could get it.

Sometimes helplessness is his bid for love, or for attention. Only by needing help can he get attention, and thereby assurance of his worth. Or helplessness can be a way of dominating others. He has found that when he cannot do for himself people stop what they are doing and try to help him. Let me cite a case in which a young man used his general inadequacy and his inability to understand and retain what he read as a means of getting reassurance and also as a means of retaliation.

This young man came to the Bureau seeking assistance in his reading skills. He seemed principally concerned about the fact that he was failing in his courses. He manifested much concern over this and asserted his willingness and eagerness to do anything that would help. On the reading tests we administered, he did not perform as well as most students do, and on an intelligence test he rated fairly low when compared to college people. He began coming to the group meetings and instead of getting better, he appeared to do worse. This upset him quite a bit; he came often to talk to the people in the program about it. It was then arranged for this boy to get individual help with his reading, but no one ever was able to really get through to the young man. He was so busy telling us how poorly he was doing--how he didn't seem to be improving. Actually, he was too busy insisting on his own failures to do much about them. Further conferences with him revealed that his family had rather high expectations of him, and when he failed to live up to these, his father began to berate him. This young man felt, and had felt for quite a while, that he was a failure and very much mis-understood. The boy was quite hurt by the father's attitude. How could he in turn hurt the father? By being just what was causing the father so much concern -- a failure. And so the young man was confronting the father with what he felt the father deserved.

This is greatly oversimplified and many aspects of this case were omitted, but I wanted you to see one way this boy was using poor comprehension skills.

Well, I could go on for quite a time if I were to try to list all of the attitudes that might play a part in determining how we read and how they might manifest themselves. It is particularly complex, too, since the same reading problem might mean something entirely different to each of two people manifesting it.

Since reading can, and does, mean so much to each of the persons coming to our reading clinics, what can we do to help insure that his experience in the program might be a therapeutic one, without giving therapy? Well, essentially, I guess, just what most of us are already trying to do. We try to provide a place where the minimum of pressure to do right, to pass, to succeed, is expected--where the optimum of reassurance, encouragement and understanding are extended to the student.--and to give the student a new and stimulating experience with reading. In many instances, a reading program serves only to recondition a person--that is, to associate pleasure with reading rather than fear or discomfort.

INFORMAL METHODS OF APPRAISAL

A. E. Denton

Texas A. and M. College

School reading programs recently have become broader and more flexible because of variance in materials and purposes of reading and the objectives of instruction. It is logical to assume that these factors have influenced greatly the complexity of diagnosing reading ability. The development of standardized measures has not been able to keep pace with the need for appraising achievement in the broader aspects of reading instruction.(13)

Carter and McGinnis (3) define reading disability as inability to learn to read when taught by ordinary classroom procedures. This deficiency is observable in the student's whole environment and may affect his educational, social, and emotional adjustment. No student should be classed as a case of reading disability solely on evidence presented by reading-test scores. Such testing would constitute only a fraction of the evaluation. All factors in the case should be given consideration. Evaluation of reading includes not only the use of formal or standardized measures but also the use of information gathered by informal methods which permit the teacher to adapt the testing to the particular needs and abilities of the students.

What are some of the more common informal techniques of appraising reading ability? Most authorities in the field of reading agree that teachers are able to estimate informally the student needs through (1) observation, casual conversation, and analysis of their work, (2) case histories or records, and (3) informal tests. The teacher, by observing the individual student in a classroom situation, talking with him, and studying his written examinations or compositions is capable of discerning certain manifestations of reading disability. The teacher is able to find out considerable information about his reading ability, interests, and need for reading.

When the student reads orally, the teacher can immediately detect mispronunciation, substitutions, insertions, omissions, additions, repetitions, and reversal of letters, syllables, words, and phrases (8). It is possible to note manifestations of emotional and personality deviation, inability to do satisfactory academic work, rate of reading, and to secure a check of comprehension in terms of summaries or questions over the material he has read.

Diagnosis from observation begins with the student's appearance at the first conference and should continue throughout his course in remedial reading. Some clues which may aid the instructor in perceiving what is wrong with the student's reading process are presented by Triggs (11):

1) Articulation--observation of the student reading silently will show presence of lip movement indicating articulation of all or part of each word he reads, forcing undue attention to each word. A comperison of oral and silent reading rates is also an aid to detection of articulation as well as the student's reading habits.
2) Eye movements--usually a symptom, not a cause, of poor reading. They are the result of other disabilities, faulty comprehension, or limited vocabulary and are best attacked by improving general reading skills. If a student's other reading disabilities are corrected, eye movements will probably take care of themselves.
3) Head movement--unnecessary head movement hinders accurate perception and decreases rate of reading.
4) Use of mechanical aids--the tendency to point with a finger or pencil is a good indication something is wrong.
5) Work or study habits--since study skills and reading skills are closely related. It is sometimes difficult to distinguish between them. Note how thoroughly the student seems to concentrate, how well he handles exercises, how much time he requires to complete certain tasks, and how well he follows directions. All these factors are important in diagnosis and remedial treatment. Does the student do as little as possible, or is he a hard worker? It is advisable to correct poor study techniques before

attempting any type of Remedial work.

Case history is another method which is valuable in diagnosis of reading problems which are so complex that the students would be more able to gain a realistic understanding of their problems and be more likely to assume responsibility for overcoming their disabilities if they were handled in individual conferences. The way in which the student is referred to the reading clinic or to the reading specialist largely determines the success of therapy. Securing a history of the student's academic achievements, interests, and family background should be a part of the diagnostic process, for it often aids in choosing the best remedial approach. Triggs (11) feels that a good case history should include:

1) A measure of scholastic aptitude and perhaps results of intelligence tests.
2) Past high school record--grades, subjects, and teachers, etc.--which would disclose physical illnesses, changes of school, absences, and the type of work he has done in courses requiring a great deal of reading.
3) Special abilities and vocational interests, which may provide motivation to develop necessary reading skills for his chosen profession.
4) Health history, which may reveal important deviations in the areas of hearing, eyesight, and speech.
5) Both objective and subjective estimates of personality, which at best can only indicate general areas of maladjustment and are unreliable in the hands of untrained personnel.
6) Educational and Socio-economic status of the family.
7) Extra-curriculer activities, which will enable the clinician to select reading material of interest to the student and also aids in establishing rapport.

Information of the above nature may be gathered from the student's cumulative record, conferences with the student, parents end teachers of the student. It is wise to work out some procedure for recording the data. If there is no definite system and place for recording the information, it may become lost or destroyed and all the work will have been in vain. Compilation of the case history should continue throughout the remedial program. This information will also be valuable later as part of the student's permanent record or in research.

A third method of appraisal is by tests. The standardized test has definite advantages in at least three areas: 1) determination of the range of reading ability in class groupings, 2) determination of the range of achievement in certain phases of reading, such as word recognition, comprehension, and vocabulary, 3) in measuring the amount of gain resulting from instruction. Such tests indicate little concerning detailed reading abilities and should not be relied on as a complete guide for directing instruction, especially for individual students (5). Traxler (10) made a critical survey of 28 silent reading tests which could be used as diagnostic measures. If a test yielded three or more separate scores, it was considered diagnostic in nature. Forty nine (49) types of reading ability were tested with the 28 tests which he judged fairly reliable, valid instruments. He stated that the diagnostician is more important than the test and that no one test thoroughly measures all kinds of reading ability.

How than will you attempt to diagnose these detailed reading abilities which cannot be measured by standardized tests? Durrell (5) points out that the following areas can be satisfactorily measured by informal tests:

1) Reading interest and attitude and the amount of voluntary outside reading.
2) Word skills employed in silent reading.
3) Study skills, detailed reading, skimming, associational skills, use of the dictionary, and parts of a book.
4) Suitability as to the reading difficulty of the materials used in classroom instruction.

The following reading skills are measured by informal or non-standardized tests:

1) Word analysis
2) Oral reading
3) Oral recall (aided or unaided by questions)
4) Written recall (aided or unaided by questions)

5) Speed of reading
6) Vocabulary
7) Critical reading
8) Study and library usage skills.

Proper use of informal tests, supplemented by observation, will yield for the competent teacher information of sufficient diagnostic nature to be useful in meeting the individual needs.

The resourceful teacher who utilizes all of the informal techniques of appraisal--observations, case histories or studies, and informal tests--will be doing a great deal in meeting and overcoming the needs of the student.

REFERENCES

BOOKS:

1. Betts, E. A., *A Prevention and Correction of Reading Difficulties*. Row, Peterson and Company, 1936.
2. Betts, E. A., *Foundations of Reading Instruction*. American Book Company, 1946.
3. Carter, Homer L.J., and McGinnis, Dorothy J., *Learning to Read.* McGraw-Hill Book Company, 1953.
4. Cole, Luella, *The Improvement of Reading*. Ferrar and Rinehart, Inc., New York, 1945.
5. Durrell, Donald D., *Improvement of Basic Reading Abilities*, World Book Company, New York, 1940.
6. Harris, Albert J., *How to Increase Reading Ability*. Longmans, Green and Company, New York, 1947.
7. Kottmeyer, William, *Handbook for Remedial Reading* Webster Publishing Company, St. Louis, 1947.
8. McCullough, Constance M., Strang, Ruth M., and Traxler, Arthur E., *Problems in Improvement of Reading*. McGraw-Hill Book Company, 1946.
9. Robinson, Helen, *Why Pupils Fail in Reading*. University of Chicago Press, Chicago, 1946.
10. Traxler, Arthur E., *Critical Survey of Tests for Identifying Difficulties in Interpreting What is Read*. Supplementary Education Monographs, No. 74, University of Chicago Press, 1951.
11. Triggs, Frances O., *Remedial Reading*. University of Minnesota Press, 1943.

BULLETINS:

12. Durrell, Donald D., "Trends in Teaching Reading." *National Elementary Principal*, 30: 42-43; January, 1951.

13. Educational Research Bulletin No. 10, "The Informal Appraisal of Reading Abilities." *Board of Education City of New York*, May, 1949.

14. "Improvement of Reading in Secondary Schools", *Texas Education Agency*, Bulletin 540, March, 1953.

ANALYSIS OF READING QUESTIONNAIRE

Albert J. Kingston

Texas A. and M. College

The following analysis is based upon the 44 questionnaires returned in the spring of 1953 to Oscar S. Causey, Texas Christian University. Of this total 29 were received from four year colleges and 15 from junior colleges.

I. In response to the question: Does your institution offer courses in reading methods, remedial reading, clinical procedures and/or other similar courses to prepare teachers to teach reading in public schools?

Fourteen junior colleges responded negatively and one only, Howard County Junior College, listed courses in the teaching of reading.

Twenty-seven senior colleges indicated that they offered two or more preparatory courses. Two senior colleges, Lamar Tech and the University of St. Thomas, do not offer work in this area.

Due to the diversity of course offerings no attempt was made in this initial tally to classify the courses as to objectives and scope. It was significant, however, that most of the courses are directed toward elementary school teaching and only four schools reported special courses which deal with High School reading *per se*. Many institutions regarded their reading courses as serving a dual purpose, satisfying both high school and elementary school needs.

II. In response to the question: Is provision made for the college students in these classes to identify and study reading problems by observing or teaching elementary or high school boys or girls?

Twenty-two of the twenty-seven institutions offering courses in reading make provisions for their students to observe or to teach elementary or high school children in the classrooms. (It is not clear whether this provision is in addition to the normal practice teaching requirements). Five schools didn't report.

Nineteen schools reported the use of a case method procedure for training prospective teachers.

Of the twelve colleges which operate reading laboratories or clinics, eight of them provide some opportunity for prospective teachers to observe and study elementary or high school children in these situations.

III. As previously mentioned only twelve of the reporting four year colleges operate reading laboratories or clinics. Thus fifteen of the reporting senior institutions do not furnish this service. None of the junior colleges reported operating a clinic.

It is interesting to note the diversity in responsible departments among colleges which do operate reading programs. These are tallied below.

Department	No. of Institutions
(a) Guidance Services	2
(b) Department of Education	5
(c) Department of Psychology	1
(d) Department of English	1
Those with dual responsibility	
Education and Psychology Departments	1
Educational Psychology and English Departments	1
Education and English	1
Total	12

IV. Only fourteen institutions report the use of standardized tests to discover the reading abilities of prospective teachers. Two other institutions report that they use standardized tests with selected groups of students i.e. those who enroll in specific courses. Only three schools report the use of teacher made tests.

V. Eleven colleges offer a course designed specifically to improve the reading ability of their students. Five institutions grant credit and six do not give credit for this course.

VI. In response to the question: Has your institution made a study to determine the amount of reading done by prospective students beyond textbook assignments? Three institutions indicated that they had done informal studies. These institutions are Texas Southmost College, East Texas Baptist College, and Austin College. None had the results available.

VII. Questions submitted:

1. What methods can be used to improve the reading competency of prospective teachers if clinics or special courses are not available.
2. Can all departments of an institution in which prospective teachers enroll for courses be made aware of their responsibilities toward improving the reading ability of the students? If so, how?
3. What percentage of prospective teachers take an active interest in reading current events? Can this be improved? How?
4. What steps are colleges taking to improve the language handicaps of Spanish speaking students? How is teacher preparation being directed toward this end?
5. What is the place of the reading program in today's school?
6. Should reading be taught as a part of a language arts course?
7. What should be the role of television and other audio-visual techniques in teacher preparation.
8. Should the teacher begin with a planned reading program or should she start with a knowledge of her children?
9. By what methods can one prevent reading difficulties?
10. What is the place of phonetics in the reading program.
11. To what extent should the teacher of any subject area be equipped to teach the proper methods of reading that particular area?
12. What specific preparation in reading does the elementary teacher need?
13. How can we get more administrators to enroll in reading courses or workshops which relate reading?
14. What kind of in-service training would be most beneficial to teachers of reading?

III. Other topics in which interest was expressed related to the administration of reading programs or clinics for college students. Questions in this area included the cost of a program, who should be responsible for it, and should credit be offered.

READING IMPROVEMENT IN INDUSTRY

D. D. Hunt

Humble Oil Co., Houston, Texas

What is this business of "speed reading?" Much has been written about it in recent years; many claims, some almost fantastic, have been made for the results of relative short periods of training. They are really not unmindful of the ago-old appeal; "Be the life of the party--learn to play the piano in ten easy lessons."

The "average executive" has been told very bluntly that he does not know how to read, that his reading, generally, is equivalent to that of a seventh-grade schoolboy. Honestly, this has been presented as "fact", substantiated by tests of more than a thousand executives. These men were tested either in special university clinics or by professional reading consultants.

They have been told that after only 15 to 20 hours of "reading training," they may expect to find their reading speed doubled and comprehension of what they read increased. Even the seventh-grade schoolboy would go for a proposition like that!

Preliminary Work

Anything that holds the faintest ray of hope for making the job of the industrial manager a bit easier is generally worth a trial. It may have been just some such feeling as this that led some of our executives to ask the question: What is this business of speed reading? To get an answer to that question, a very careful but not too conclusive investigation was made of what was actually being done in reading training in this area. It was not too conclusive because at that time nowhere in the Southwest could we find where a reading course had been conducted in industry. However, we recommended to management that an experimental course, in which they would serve as "guinea pigs," be conducted by a professional reading instructor. Management agreed and a 20-hour course was conducted on Company time in the general offices in Houston by Dr. Selma E. Herr of Tulane University. The results of this course were sufficiently encouraging to prompt management to approve the course on a continuing basis to be conducted by members of the Training Division.

Problems Peculiar to Industry

The experimental course showed that some changes were necessary to adapt it to industrial needs. One of the biggest problems in conducting a reading improvement course in industry lies in tailoring it to fit the circumstances peculiar to industry. Thus far, "students" have been from upper management levels. They are executives who, for the most part, are already overloaded with responsibilities. Today's problems always look bigger than tomorrow's; there is little time for anything but current activities. This makes it difficult for them to meet with any great degree of regularity or at specific times. Therefore, sustained attendance constitutes one problem.

The duration of the course, the frequency and length of meetings are necessarily limited. The scope of the course must be given careful consideration. Even in small groups there is a wide divergence in such characteristics as age, formal education, background, and experience. From a practical point of view, it is impossible to spend much time on such essential elements of reading improvement as vocabulary development and concentration exercises. Most of the training in these phases is incidental to other aspects of the course. This course was organized and presented with a consideration of these and other circumstances.

Organization of Course

Each class is limited to 12 members or "students". They meet during regular work hours at a frequency of twice each week for a period of 10 weeks. Each meeting is 1½ hours in length. The first meeting of each class is devoted entirely to a test to determine the beginning reading rate and comprehension of each member. Diagnostic, Survey Section Tests are used throughout the course. The second meeting is spent in orientation. An explanation is given of just how the course will be conducted. Each piece of equipment used in the course is demonstrated and its purposes explained. At this point, an explanation of the mechanical aspects of the reading process is given the group and the premise is established that we proceed on the basis of correcting certain mechanical faults. To supplement this explanation, a 10-minute motion picture film entitled "Speeding Your Reading" is shown.

Two Phases of the Course

With the exception of the 11th meeting, which marks the mid-way point of the course, and the 20th, or last meeting, of each course, all of the others follow the same pattern. This, then, divides the course into two phases: four meetings for orientation and testing and 16 meetings for the actual training. Beginning with the third meeting, the class is divided into two sections of six "students" each.

The training is also divided into two parts, group and individual work. While one section is given the group training, the other is given individual training in another room. The duration of each part is 40 minutes. There is a 10 minute coffee break between sessions which gives time for relaxation and change of classroom. The group training includes 15 minutes on tachistoscopic exercises, 10 minutes on written perceptual training exercises, and 15 minutes exercise on reading films projected by the Speed-Reader.

That half of each training period given to individual work includes 25 minutes of practice reading on the Reading Accelerator. Practice reading material is taken from the Readers Digest, Coronet, and selected novels. During the last 15 minutes of each of these periods, a reading test from SRA Better Reading Book 3 is given. These are taken alternately, paced by the Reading Accelerator and unpaced. By these tests, daily progress of each individual is indicated. Progress is also determined and compared with that shown by the reading book tests, by other Diagnostic, Survey Section tests given at the mid-way point of the course and at the end.

Results of the Course

In brief, our "students" found at the end of a 30-hour course, they read 86% faster than they did at the beginning and, at the same time, their comprehension of what they read increased 17%. Five months after they had completed the course, they found that they retained 50% of their gain in reading speed and 51.% of their increase in comprehension. It will be interesting to see what this retention looks like one year after these people finished the course.

The table on page 132 shows the individual progress attained through the course and the retention of progress five months after completion for 18 of the 24 members enrolled in two different classes since the experimental course. The other six members of these groups were unavailable for the retention tests.

Now, if we could define "reading", we might be able to tell whether this is good or bad. We would at least be able to tell if the tests on speed and comprehension have any validity with respect to a person's real ability to read and comprehend. But, at the present, we know of no better means for determining progress so we use this means as a yardstick until some better device is suggested. Possibly the best indication of success is the unanimous feeling among "students" that the course helped them a great deal.

We are particularly indebted to Dr. A. J. Kingston of Texas Agricultural and Mechanical College and to Mr. Oscar S. Causey of Texas Christian University for their advice and counsel. If this course may be considered successful, they certainly deserve much of the credit. We have drawn freely from all that we have observed and heard in the way of techniques and practices, and have attempted to organize and apply them to the best advantage under the circumstances peculiar to the industry.

	Beginning		Close		Increase			5 Months After Close		Increase over beginning		
	W.P.M.	% Comp.	W.P.M.	% Comp.	W.P.M.	%	Comp.-%	W.P.M.	% Comp.	W.P.M.	%	COMP.-%
	286	75.0	600	80.0	314	110.0	6.7	455	82.5	169	59.2	10.0
	342	75.0	670	87.5	328	96.0	16.7	492	82.5	150	44.0	10.0
	329	77.5	728	87.5	399	121.3	12.9	511	85.0	182	55.2	9.7
	273	87.5	468	92.5	195	71.5	5.7	420	87.5	147	54.0	0
	316	77.5	750	95.0	434	137.3	22.6	645	87.5	329	100.4	12.9
	277	77.5	520	87.5	243	88.7	12.9	429	80.0	152	54.5	3.2
	273	80.0	503	90.0	230	84.5	12.5	442	85.0	169	62.0	6.3
	256	85.0	481	87.5	225	88.0	2.9	299	77.5	43	16.8	8.8
	208	62.5	420	95.0	212	102.0	52.0	325	70.0	117	57.0	12.0
	234	57.5	381	62.5	147	63.0	8.7	277	67.5	43	18.4	17.4
	190	70.0	290	82.5	100	52.7	17.9	260	75.0	70	36.8	7.1
	269	85.0	412	97.5	143	53.3	14.7	351	85.0	82	32.0	0
	204	72.5	282	87.5	78	38.2	20.7	238	85.0	34	16.7	17.3
	269	47.5	455	75.0	186	69.2	58.0	360	77.5	91	33.8	63.2
	368	77.5	660	92.5	292	79.5	19.4	425	80.0	57	15.5	3.2
	299	57.5	446	80.0	147	49.3	39.2	342	65.0	43	14.3	13.0
	299	72.5	565	72.5	266	89.0	0	368	75.0	69	23.2	3.5
	217	85.0	520	97.5	303	139.6	14.7	364	90.0	147	68.0	5.9
Avg.	273	73.5	508	86.1	235	86.1	17.3	390	80.0	117	43.0	8.9

Amount of Original Increase Retained 50% 51.5%

SOME FACTORS IN THE READING BACKGROUND OF COLLEGE STUDENTS

Oscar S. Causey

Texas Christian University

Principals of representative high schools in one state were requested to furnish information that was considered by the writer to be of value in determining some of the significant factors in the reading background of college students. Principals of high schools of various sizes, both rural and urban, were requested to cooperate. One hundred replies were received promptly.

One request was for comment upon the often repeated statement, "Every high school teacher should be a reading teacher". The following fifty comments are typical of those received.

1. Excellent statement.
2. Not possible or practicable.
3. Yes, this is true even with mathematics.
4. It is a nice idea but hardly true. The average teacher is not prepared to teach reading.
5. True, but most teachers do not have the time for much supervised reading.
6. In senior high school, no. Not practical. Just as well say that all should be a shop, music, or Spanish teacher. Perhaps all English teachers should.
7. As true as can be, but we have few converts. However, we need to get out feet on the ground and do the job we should do before the high school gets them.
8. Ideal, but will never be done.
9. Yes, according to their training and ability, however, specialists are needed in this field and a definite reading program established in speed and comprehension.
10. Too little, too late.
11. Reading can be taught effectively only when it is taught in every class - not in just a reading class.
12. This is an important statement, but is somewhat

limited because of lack of reading skills in many teachers.

13. Yes, except that the subject content, areas to be explored, and voluminous cultivation of these special subdivisions of curriculum make concomitant attention mandatory.
14. We will not have a good reading program until this is true.
15. Every teacher is a reading teacher. She teaches the child to get thought from the printed page. Every teacher is concerned with vocabulary development of his particular area.
16. Every high school teacher should be interested in the general improvement of reading but special training is necessary for remedial work.
17. The statement is true, but so far we have failed to convince the teacher.
18. A teacher would include reading with a multitude of other things.
19. Most all learning in school is dependent upon ability to read. Because of their inability to read students want the teacher to tell them the answers. Learning through reading is more effective, therefore, teachers need to know how to teach reading to facilitate better reading.
20. I agree - this is not feasible because of the many difficulties involved in high school curriculum, abilities, etc.
21. Anyone who teaches, teaches reading.
22. Good reading habits and skills are certainly essential in the learning situation of every high school pupil--therefore every teacher should take proper notice and give due consideration to the reading habit and skills of every pupil in every subject.
23. Most high school teachers are carrying such a heavy load that they are unable to have reading classes. Favor having reading classes and reading teacher giving student credit when he takes reading course.
24. Developing study skills suitable to each different subject, including various types of reading habits, is the responsibility of every teacher. Teaching remedial reading requires specialized training in methods of teaching reading.

25. Every teacher should be able to give slow pupils some help in reading difficulty.
26. This is true, but it oversimplifies the problem.
27. If a child can read, not just call words, it will help the child in any subject they are taking, from mathematics to literature.
28. We subscribe to this statement.
29. This is important because of the different types of reading requirements in the various subject matter fields.
30. By all means every teacher should know and practice the reading techniques pertinent to his or her subject. Science teachers or mathematics teachers will have a different vocabulary, different organization of textbooks and different methods of reading.
31. Very few are, seems that too many feel that students just learn reading.
32. If students are not taught to read, they are going to make little progress in high school. Surely, every teacher should stress reading.
33. This is probably true, but the other often repeated statement is equally true, "What is everybody's business is nobody's business.
34. The statement speaks for itself.
35. A reading teacher is a specialist. Every teacher cannot teach reading.
36. In a sense this is true, but as a general rule, the classes are set up so that attention to reading problems in the classroom is almost impossible. Lack of materials keeps the average high school teacher from being much help.
37. True, but every teacher cannot do the job reserved for the specialist.
38. Unless we have a course that has for its primary objective the improvement of reading ability, every teacher must teach reading in their other classes.
39. In my opinion, the statement is true. We are doing our best to make it a practice.
40. I believe the statement is true.
41. Our school does not have an established program for improvement of reading ability.
42. Could this not be done by each teacher teaching vocabulary peculiar to their own subject as well as choosing current material and other material to the subject.

43. I heartily agree. Especially in high schools where special reading courses can or may not be included in curriculum.
44. True, but exceedingly difficult to secure.
45. This should be true. Every teacher could have the opportunity if the proper training had been provided for him or her.
46. Reading being of fundamental importance in all activities; all teachers should be capable of assisting the student; however, I believe that those teachers who should be especially trained are the English, speech, history, science - those whose courses demand extensive reading.
47. Every high school teacher is a reading teacher.
48. Under the present setup this seems to be true. Yet, with adequate reading programs in the grades, it should not be necessary to such an extent.
49. Not unless he is prepared; not a hit or miss attempt at teaching reading.
50. There is a definite need for reading improvement in the high schools.

The principals were also asked to indicate the title or position of the person in charge of reading in their respective schools. The summary of the replies, arranged in descending order of frequency, is as follows: English teacher, reading teacher, counselor, director of reading program, principal, classroom teacher, director of curriculum, language-arts teacher, reading consultant, supervisor of reading, department chairman, director of clinic, school supervisor.

Fourteen of the schools reporting stated that high school credit was given for courses in which the major emphasis in the courses was placed upon improvement of reading ability. Seventy two percent of the principals reported that they have difficulty in finding teachers well qualified to teach reading in the high school.

COUNSELING IN RELATION TO THE READING PROGRAM

Tandy W. McElwee

Louisiana State University

The remarks that I will make relative to counseling and the reading program are based primarily on the reading program as it is organized at Louisiana State University. The reading program at Louisiana State University is quite similar in many respects to those in other institutions; yet in some respects it is different. For that reason I would like to take a few minutes to describe briefly the reading program at Louisiana State University.

The Remedial Reading classes meet one hour a day, two days each week for a period of twelve weeks. The course is non-credit.

Students who score below a scaled score of 49 on the Cooperative Reading Test, Higher Level, are encouraged to enroll in the reading course. Approximately one-third of the students score below that point. It is not compulsory for students scoring below a scaled score of 49 to enroll in the course, but, if a student enrolls, he is expected to complete the course. Any student who wishes to enroll in the course may do so regardless of his score.

The program is based on group instruction rather than individual instruction. Materials used in the reading classes are: Study Type of Reading Exercises, College Level, by Ruth Strang; Thirty Days to a More Powerful Vocabulary by Funk and Lewis; Reader's Digest; and Purposeful Reading in College by McCallister. The Tachistoscope and reading films are used in the class. Reading Rate Accelerators are available for use by the students outside of the classes.

I hope that the preceding comments, brief as they are, will help you to understand the remarks that are to follow.

The counseling relative to the reading program at Louisiana State University may be divided into two broad areas; first, the counseling with students prior to their enrollment in the reading course, and second, that counseling which is done in connection with the reading course.

The counselling that is done prior to enrollment in the reading course is done by a number of people and has as its main purpose the acquainting of students with the service that is available to them. The service is in the form of the reading course which is designed to help students improve their reading ability and consequently do better college work. It may seem a bit odd that one would have to "sell" reading improvement to a person who is a poor reader, but in a program such as ours where there is no credit to be earned from taking the course, it sometimes takes quite a bit of salesmanship to get across to the students the fact that an improved reading ability will pay dividends in all classes taken.

The first counseling that is done relative to the reading program is by members of the faculty. Each new freshman is assigned to a faculty counselor whom he sees prior to registration. The faculty counselor discusses with the student the value of a good reading ability and encourages the student to take advantage of the opportunity to enroll in the reading class if his reading ability is below average.

When the student presents himself for registration he again talks with a faculty member who assists him in registering. This faculty member is not necessarily his faculty counselor. The faculty member has available an alphabetic roster of all new freshmen. Data relative to the student's performance on the English, Chemistry, and Mathematics placement tests, his rank in his high school graduating class, and whether or not he scored below a scaled score of 49 on the reading test are on this roster. The faculty member urges each student who scored below a scaled score of 49 to enroll in the reading course.

After the student, who scored below a scaled score of 49, has completed registration for his academic courses, he meets a representative of the Reading Department. He has already been acquainted with the reading program by the two previous conferences with faculty members and at this time the representative of the Reading Department discusses with him the organization of the reading classes and encourages him to enroll in one of the classes. Between fifty and sixty per cent of the students scoring below a scaled score of 49 enroll in one of the reading classes.

A check is made of the academic record of all students who were invited to enroll in the reading classes, but did not do so and all of these students are contacted again at the time they register for the second semester. The representative of the Reading Department again discusses with these students the value of a good reading ability and suggests that they could improve their academic work by improving their reading ability. A majority of these students who did not enroll in reading during their semester do enroll in one of the reading classes their second semester in school.

The previous comments may appear to have little relationship to counseling; but in a program organized on the basis as that at Louisiana State University the counselling done relative to the enrollment of students in the reading program is very necessary if an appreciable number of the students are to be served by the reading program since there is no academic credit, _per se_, to be earned by taking the reading course.

The second phase of counseling in relation to the reading program takes place after the students are enrolled in a reading class.

Counseling in relation to visual difficulties. Students enrolled in the reading class are given the Keystone Visual Survey Tests. The results of the tests are discussed with the students and any student whose tests results indicated a possible visual handicap is encouraged to visit his doctor or optometrist. It is suggested to all students that they should visit their doctor or optometrist if they experience eye strain as a result of reading.

Another phase of the counseling of students enrolled in the reading program is necessary because of the organization of our reading program. This is the counseling which is done relative to class attendance and dropping of the course. Possibly, the need for this counseling is brought about because we have failed to meet the needs of the students. However, most students feel that the course will do them some good. "I just don't have the time for it and besides that, I don't get credit for the course" is the usual answer we get when we ask the student why he wishes to drop the course. In a few instances we have found that the student is carrying a heavy academic load, in which case it is suggested that he would profit by dropping one of his regular academic courses and continue in the reading course. We made a comparison of the academic records of students who did not take the reading course. This study was made in terms of paired students. Students enrollingthe course were paired with students who did not take the course (on the basis of general academic ability and reading ability). When the results of this study are discussed with students wishing to drop the course the students usually volunteer to remain in the course and usually work harder at improving their reading ability.

The third and most important phase of counseling students enrolled in the reading course is that counseling which is done with the students relative to their individual reading problems. Even though the course is organized primarily on the basis of group instruction, each instructor has a conference with each of his students. During this conference the student's individual reading problems are discussed and the instructor helps the student work out a program of work to be carried on outside the reading classes. This program of work is designed to assist the student in improving the basic reading skills in which he is most deficient. The students are encouraged to come in and discuss their problems relative to reading and study.

The remarks I have made relative to counseling and the reading program may be somewhat different from the counseling which each of you has been doing in your reading program. I think all of us have to organize our programs to fit the particular situation at our institution. In that the primary purpose of the reading program at Louisiana State University is to assist students to develop a reading ability adequate to do successful college work, our first problem is to motivate the students to the point where they will avail themselves of the opportunities to improve their reading ability. Our second problem is to assist the students, who are desirour of improving their reading ability, to develop an adequate reading skill. Our conseling is done to solve these problems.

COUNSELING AND THE READING PROGRAM

Albert J. Kingston

Texas A. and M. College

Any institution of higher learning which includes in its offerings some sort of remedial or developmental reading program is, in my opinion, demonstrating its acceptance of that educational philosophy commonly called "the student personnel point of view." One of the tenets of the student personnel philosophy is the belief that any institution should be concerned with the development of the "whole student" or his total personality rather then merely concerning itself with his intellectual or academic growth. The philosophy also includes the belief that all students cannot be expected to adjust to college situations as rapidly and readily as others. Believing these things, such institutions are prepared not only to modify their programs so as to assist students, but also are prepared to assist some students to make necessary personal and individual adjustments. Thus, adjustment may result from modifications within the college program or within the student. Counseling may be said to represent one of the main methods through which changes are effected by the student. The development of insight into one's difficulties, the achievement of clearer and more feasible educational and vocational goals, the learning of more adequate social skills, and other gains too numerous to mention may all be products of the counseling process. On the other hand, a college reading program may be said to demonstrate a college's willingness to modify its curriculum to meet the needs of students. In one sense then, both counseling services and reading services may be said to have common goals and objectives - aiding the student to adjust to the college community. Does it not follow, that these services should be coordinated?

Most educators believe that reading is one of the most essential academic skills which a student needs if he is to adjust successfully to college life. Inadequate reading skills may result in a student encountering academic failure or making slower scholastic progress than might otherwise be anticipated. A student in this situation often develops feelings of insecurity and anxiety. His anxiety sometimes further prevents him from concentrating on his studies and he fails to progress as well as he otherwise might. This condition results in complications as it further increases his anxieties. A cyclical pattern or "vicious circle" results. In such cases two different approaches have been demonstrated successfully. Counseling which relieves the student's anxieties and reduces his tensions often results in enabling him to operate more effectively in learning situations. Sometimes his reading skills appear to improve spontaneously. Another approach is to concentrate upon the development of improved reading skills. In such situations the student's anxieties may be relieved as he discovers he can more adequately meet academic demands. Profitable results have been obtained through both methods. If this is true then, it would seem reasonable that a coordinated approach might be best in such cases and that the most efficacious results can be obtained when both counseling and reading services are employed and coordinated. We might ask ourselves if we are securing the maximum use of our couseling services for such purposes.

Another intimate relationship between the reading program and the counseling service should be emphasized. Each service is in an unusual position to discover students who need the specialized assistance provided by the other. Counselors and reading specialists should be alert at all times to the advisability of referring students. Only when this procedure is followed can effective assistance be given to some students. In many colleges and universities the reading program is administered by a non-psychologically or non-clinically oriented department. In such institutions the testing and counseling service must be utilized to assist in the program. Valuable diagnostic information can be furnished by psychological testing and all of us will agree that we can more readily assist a student when we possess accurate information about his interests, motives, intelligence, and other characteristics.

Without complete testing it is sometimes impossible to determine which factors are causal and which are secondary or even symptomatic to the reading disability.

It is my opinion that the college reading program is so closely related to the counseling services in goals, objectives, and methods that only when close coordination is maintained can success be achieved.

READING PROGRAMS FOR ADULTS

A. J. Pellettieri

University of Houston

This presentation is intended to supply some answers to questions raised at last year's reading conference. It appeared at that time that answers were needed to such questions as, "How long should adult programs continue?" and "How long should each session last?" There were also questions hinging upon tests used in the measuring of the rate of reading and comprehension. The author will not be able to supply the pictorial presentation and will therefore confine himself to enumerating some of the main ideas.

1. One study made by the writer showed that graduate students made no appreciable gains during a period of time while other unselected groups of adults receiving training made rather significant gains in similar tests. Both the Iowa Silent Reading and the Otis Test of Intelligence were administered to both groups. The graduate group received no improvement of reading instruction. Conclusion: It appears that reading among adults can become static. It also appears that adults can increase somewhat significantly in effective reading performance.

2. A second study conducted by the author dealt with senior high students. This group was made up of an average distribution of high school seniors except for a number which seemed to excel other seniors in the same school. A class in the improvement of reading was conducted. After twelve weeks, the last session used for testing, profiles were made of the two students showing the slowest rate of improvement and the two students showing the fastest rate of improvement. Conclusion: The character of improvement of all four of the students seems to be consistently positive. A gradual growth for the slower and a rapid growth for the faster students. There is an indication that training in reading improvement is desirable for high school students.

3. An appraisal of profiles of standardized

reading tests would show wide discrepancies even among good readers. Adults who score above the norms in advanced tests on the high school and college level, would make low scores on such things as directed reading, location of information, and the selection of key words. These low sub-test scores probably reflect occupational practices. People employed in research laboratories may have little or no need for skill in indexing.

4. Testing for comprehension poses an unsolved problem. The writer has administered comprehension test questions to students who had not read the assignment. These students have obtained rather high scores. The questions as to whether reading is necessary for comprehension are to be debated under such conditions.

An analysis of a so called three part comprehension test, (a) reading for detail (b) reading for central thought (c) reading for inferences, reveals that one's ability to correctly answer five or more questions out of seven does not mean that he will answer correctly the questions dealing with central thought. Furthermore, the ability to correctly infer does not mean that the person will answer correctly the central thought or be successful in detailed questions.

5. The use of pacers and flash devices, when contained within the limits for which they were devised, proves to be beneficial. Data for our adult group indicate that progress made in free reading, under pacing conditions and with tachistoscopic material carried on concurrently, is related. This is not intended to mean that there is transfer of training.

6. Multiple sessions per week over a period of three months seem to yield better results than short sessions or classes which are conducted on a one hour, one time a week basis.

Adult courses which meet two hours on a one time a week basis seem to yield better results than classes which meet for only one hour.

Courses which provide for theory and laboratory sessions seem to be preferred by adults more than classes conducted on a practice basis only. Among comparable adults, those who attend more frequently and regularly make the greater gains.

Rechecks show that gains made are retained when the individual continues to apply the new skills acquired during training. Frequently over-looked is the fact that short classes do not lead to lasting and permanent gains.

I would like to suggest to professional members of the conference that these adult courses be more appropriately labeled as Reading Efficiency or Reading Improvement courses. May I also suggest that we emphasize meaning, not speed. Speed is fairly readily obtained as a by-product in a course of reading improvement.

The very remarkable success of colleges and universities during the last six or eight years with reading programs designed for improving reading ability of their students has led to frequent inquiries about similar programs for adults.

For the purpose of determining the extent of adult reading improvement programs offered by colleges and universities the chairman of the Executive Committee of the Southwest Reading Conference sent recently an inquiry to all the state universities in the country and to one of the larger private institutions in each state. Twenty eight replies were received from state universities and twenty three from privately controlled institutions.

The questions submitted and the summary of the date received are given below.

COURSES FOR IMPROVING READING ABILITY OF ADULTS

1. Do you offer a course that has as its chief purpose improvement of reading ability of adults other than those enrolled as regular day students in your institution?
   Yes, 28. No, 23.
2. Which department or school in your institution offers the course?
   Psychology, 3. Education, 8. English, 3. Other, 12. ("Other" includes student personnel, extension, testing services, adult education, guidance, speech and general education.

3. If you are not giving such a course, are you planning a course?
   Yes, 6. No, 14.
4. Length of course in weeks?
   7 weeks, 2. 8 weeks, 1. 9 weeks, 1. 10 weeks, 10. 11 weeks, 1. 12 weeks, 5. 15 weeks, 4. 16 weeks, 1. 17 weeks, 1. 18 weeks, 1.
5. Class hours of attendance required?
   The range is from 10 to 64.
6. Number of meetings per week?
   Range 1 to 5.
7. Are credit hours given for the course?
   Yes, 9. No, 18.
8. How much credit?
   Seven institutions give credit. Credit varies from 1 to 3 semester hours.
9. If no credit is allowed, how is the course classified?
   Service courses, 9. Extension, 10. Others, 4.
10. Number of students enrolled in the course this semester?
    Range--smallest enrollment, 14. Largest enrollment, 500. Total in all institutions reporting, 2334.
11. Is the course offered away from the campus?
    Yes, 10. No, 17.
12. Names of workbooks used by the students?
    Increasing Reading Efficiency, by Lyle L. Miller. Study Type of Reading Exercises, by Ruth Strang. Better Reading Books, by Elizabeth Simpson. How to Read Better and Faster, by Norman Lewis. Effective Study, by Robinson. A Manual of Reading of Exercises for Freshmen, by Pressey. A College Reading Workbook, by Sheldon and Carrillo. Efficient Reading, by Brown.
13. Reading instruments used?
    Reading pacers, 23. Films, 17. Tachistoscopes, 18. Others, 3.

WORD ATTACK AND VOCABULARY DEVELOPMENT

Mrs. Hazel Horn Carroll (Mrs. Timothy)

Southern Methodist University

Word attack will be emphasized in this discussion with vocabulary development as a by-product. To put it in a popular streamlined title--Word Attack Goes to College.

After all, our vocabularies do enlarge as we sharpen our word attack skills.

To begin with, I should like to take a few minutes to ask you to write down what you do when you meet an unfamiliar word.

Last year, the director of our Reading Clinic, was working with a group of 90 school principals and administrators. She asked them for this same information I have requested from you.

Some of the answers would have startled you and caused you to think of the need for word attack skills at any level. One man said: "Get someone to go to the dictionary." Another said, "I ask my wife." Still another replied, "If it is essential that I get the meaning, I go to the dictionary."

Of the 90 educators most used the dictionary or contextual clues to gain the meaning of new words. Only eight used word-form clues. Eight used structural analysis and seven used phonetic analysis.

In reporting these answers I have mentioned several methods of word attack. Now, I should like to list five methods which I shall discuss. They are: word form, structural analysis, phonetic analysis, contextual clues and use of the dictionary.

I mentioned the results of this informal questionnaire to indicate the need for the teaching of word attack skills in college so that they may be used there and in adult life.

Frances Trigg says in "Improve Your Reading" that many college students do not realize how many words they do not know, and do not care enough to do anything about it until they are taught how important a good vocabulary is.

She tells this interesting little story. She has a student pretend he is going into a bookstore to buy a book. Then all the words in the book he doesn't know say, "Let's disappear. This student wouldn't appreciate us anyhow because he doesn't know what we mean." The student would pick up the book and in astonishment call the clerk and complain, "Look here, this isn't right. I'm paying hard earned cash for this book and I do not want one full of blank spaces. I want everything I'm paying for." He then would pick another book but he still wouldn't get what he was paying for unless he had some way to unlock the words he did not know.

For a thorough understanding of these unlocking skills, I am going to explain them as they are first taught.

Using word form clues is the noting of likenesses and differences in words. The child who notices that sand is just like hand except for the beginning is noting word form. The skills essential (noting likenesses and differences) for using word form clues are basic to successful structural and phonetic analysis.

These two types of analysis are interrelated and often must be combined in attacking a word. In these instances structural analysis logically preceded phonetic analysis in the word attack process.

Careful scrutiny of words shows that they are related in families. Each word has its ancestors, cousins and distant relatives.

Each family is descended from a parent word, and through every word that belongs to that family has a specific meaning of its own, it is always related to the meaning of the parent word. For example, the words *port*, *portfolio*, *portable*, and *porter* are all descendants of the word *porto*, a Latin verb that means "to carry"

Each has its particular meaning but they all refer in some way to the act of carrying. Now, suppose you came across the word *portage*--you could guess it was a cousin of *porter* and a descendant of Papa *Porto*. So, learning a number of parent or root words of the English language will help you to guess the family connection of many unfamiliar words you meet.

Learning the meaning of commonly used prefixes and suffixes will give you some more tools in your word detective kit.

So, learning parents, prefixes, and suffixes will make old friends of words once strange. If you meet importable, you know im means "in", port means "to carry" and able means what it says--wholly, "able to carry in."

Another phase of structural analysis is dividing words into syllables. And if you can pronounce the syllables that appear you will find that many words that were unfamiliar in print are familiar when you pronounce them.

A very usable system of dividing words is given by Kottmeyer in his "Handbook for Remedial Reading." He gives the rule that the number of vowels (except final E and double vowels which count as one) determine the number of syllables a word will have.

Skills become more automatic when they are practiced systematically and regularly. In order to provide this, I have the practice in my classes of having what we call "the three new words" on the board for each meeting. These are not always new words, but each one represents one of the three main parts of structural analysis which are: looking for parts of a compound word, looking for familiar prefixes, suffixes and roots, and dividing words according to the rules of patterns just explained. These three words are kept in columns, one column for each division method. A new word is added to each column at each class meeting.

Examples:

RECEIVER/SHIP
DOOR/PLATE
EDGE/WISE

RE/DOUBT/ABLE
DIS/MEMBER/MENT
DUCT/LESS

v cvc cv
RE/DUN/DANT
vc cv cv
DOC/TO/RATE
vc cv cvc cv
EC/TO/DER/MAL

The building of these lists in columns impresses on the students these methods of attack and gives to me far better results than any other method of practicing them.

Phonetic analysis will not be given as much emphasis in a college group as structural analysis but the reviewing of some phonetic elements is helpful, I believe. The ones I suggest are: (1) Two vowel letters may be used to represent variant single vowel sounds as AI in rain and plaid, and as OO in food and good. (2) Diphthongs or two vowel sounds blended to form one speech sound. (3) The only vowel sound in a word or syllable is affected by an "R" if the "R" follows it. (4) If "A" is the only vowel in a syllable or word, and it is followed by "l" or "w", the "a" then has neither its long nor its short sound.

These rules are most easily taught, I believe, by posting a pronunciation chart containing these elements and a key word. The list I use is:

oi-oy--oil--boy
ou--house
ar--star
ur--turtle
er--fern
ir--bird

ar-aw--taught--strawberry
ay--tray
ew--screw
oo--broom
oo--book
ai--snail
ai--plaid

Last year at this conference Dr. Fiehler presented a most interesting discussion of this system of pronouncing and getting the sound of words by using helper words. For example, malign could be pronounced with the help of sign or align.

One of the most profitable and enjoyable means of recognizing words and getting their meanings is from context. The necessary context may come before, after or both before and after the unknown word. It may appear as an appositive, as a qualifying phrase, or in parenthesis.

Guessing meanings from context is a valuable device--and according to our informal surveys, the most frequently used device. But to depend on this alone would cause many mistakes.

The fifth and last method of word attack which I shall mention is use of the dictionary. I put it last because I believe that other methods should be used first, so as not to interrupt reading. But it is a valuable tool and one that should be used easily. To do this, use of guide words can be taught. (Students don't always reach college knowing this).

It usually is profitable to discuss word origins, synonyms, antonyms and homonyms. The big unabridged dictionaries will, of course, give more complete and detailed information. The dictionary should be used--but used wisely and as a tool--not as a crutch.

I have discussed word form clues, structural and phonetic analysis, contextual clues and use of a dictionary as five methods of word attack.. The use of these will aid in word recognition and word meaning.

GROUPING IN REMEDIAL READING

Elsie Dotson

University of Texas

I. Since I am currently involved with this problem of trying to group students in the most effective manner, I have several rather strong feelings on the subject, and the first that comes to mind (I'm sure this is because it is the one that has afforded me the most difficulty lately) is the multiplicity of practical considerations that you need to have in order to launch into this. I would like to go into a few of these with you, since they are assuming such a place of eminence in my thinking.

A. Sufficient time for individual interviews. Anytime you work on a group basis, you are going to have to allow time for individual contacts.

B. Adequate lesson preperation and sufficient time in which to do this. In working with people on this problem of reading improvement, you will have to do a lot of improvising, i.e., using materials in ways other than those designated in manuals and finding new materials to meet current needs. Also, you have to know the materials well enough to be able to use them in stimulating further thinking. Another factor involved in this consideration of adequate preparation is planning for diversity within the group. There may be times when you will want to put this group on an assignment while you work with only one or two members of the group. This involves putting the group on a meaningful task--not just one that will keep them occupied while you work with smaller numbers.

C. Diversity of materials. As you can see from the previous point I just discussed, you will need a diversity of materials if you diversify the group. Also, you may want to switch activities entirely for a while and this may necessitate completely different materials.

D. Interest in group activity. On a more personal basis--but a very practical one--working with groups requires a belief, desire, and proclivity to work in a group situation.

These are some of the things I think a person should think through thoroughly if he is interested in working with groups. And I cannot emphasize enough the amount of time you will need for preparation and for individual contacts.

II. Why group? Now let us go into some of the why's of grouping.

A. Homogenous groupings:
Well, of course, one of the most obvious and plausible reasons for grouping is to try to get students with similar problems in the same group, thereby making it possible for you to work more intensively with the problem at hand.

B. Vary the size of the groups:
By grouping, you can vary the size of the group according to the goals you set up for each grouping--the goals being determined to a great extent by the needs of the students. Therefore, in my opinion, some skills lend themselves to a large group approach--one that is relatively mechanical--such as working on increasing rate of reading, while the optimum conditions for the acquisition of most comprehension skills call for smaller groups.

C. Individualized approach:
If you are able to determine when and where smaller groups are the most effective setting for certain studies, then you can use a more individualized approach within the smaller group. The members within the group will have a greater opportunity to express themselves, both to you and to each other.

D. Gives the instructor a chance to keep in tempo with the individual. By working in smaller groups the instructor knows when to change the activity of the group, when to work on different skills. By working more intimately with the group, the instructor is better able to know when to refer the student to other agencies which might be able to meet other needs that could be interfering with the student's efficiency. Such other agencies as provide: (1) Vocational guidance, (2) personal counseling, (3) opthalmological care, and (4) tutoring.

E. Greater opportunity for diagnosis. By working in smaller groups the instructor is confronted with an opportunity for continuing diagnosis and analysis of the student and his reading skills.

F. Small homogenious groups provide a greater growth climate. In a smaller group setting the student has a greater opportunity to find himself.

1. Gives him a chance to get support through identifying with others. I have noticed that in groups in which there is a great diversity of skills, some students tend to shut themselves off from the group. But a similarity of preformance seems to invite participation; with others like himself the student is freer to see himself as he is--to explore then, why he is this way, and why others are. It is rather obvious that the student must first accept his level of performance before he can change it.

2. Social climate. Small informal groups soon become a social as well as an instructional gathering. This makes for more interaction, self exploration, group reassurance, encouragement, support and criticism. Also, it is a new reading atmosphere, and thereby becomes a positive conditioning experience in place of the unpleasant experiences the student has had previously with reading.

III. Basis for grouping:

Well, after all this talk about why one should try to group--we come to the basis for grouping. This is an enigma to me, I will admit. What is the most effective method of grouping? Instead of attempting to answer that question--for I do not know the answer--just let me tell you how we are doing it at the University of Texas and why.

A. Small groups, you gathered from all I have said previously that I favor a relatively small group, by this I mean anywhere from 5 to 15.

B. Homogenous aspects. Also you have gathered that I believe people of similar levels of attainment should be grouped together. We use a somewhat gross means of doing this--namely:

(1) All students who, on the DRT, read below 200 wpm and who get below 25% of the comprehension

questions right, are put in one group.

(2) Students who, on the DRT, read at a rate of between 200 wpm and 300 wpm and who get 75% or more of the comprehension questions right are grouped together.

(3) Those reading between 200 wpm and 300 wpm but who get only about 50% of the comprehension questions correct are grouped together.

(4) Those reading faster than 300 wpm and who get 75% or more of the questions correct are grouped together.

By grouping this way we have eliminated two rather obvious differences in skills--rate and comprehension.

All we are aiming for here is that no one will finish reading way ahead of the others and no one will consistently get more right or wrong than the others when we discuss meanings. As I have mentioned before, it has been my observation that glaring discrepancies seem to serve to drive some students away from the group. We do shift students from group to group. It sometimes happens that even though a person's scores on the DRT are similar to the scores of others in his group, his behavior in the reading program is quite divergent from that of the others. In this case he is usually shifted to another group.

I am sure that you, like I, feel that grouping is one of the most pertinent problems facing us today and should any of you have other basis for grouping, I would welcome the opportunity to discuss it with you.

THE SOUTHWEST READING CONFERENCE, 1951-1953

Miss Lucile Willowby

University of Oklahoma

Because the Southwest Reading Conference is a unique organization, so far as any of its members know, some of the details of its origin and function may be of interest to new members of the Conference or to college reading specialists in other sections of the United States.

In the fall of 1951, Oscar S. Causey, Director of the Reading Laboratory, Texas Christian University, wrote to the directors of several other reading programs at Southwestern colleges, asking if they felt that a conference on college reading would be useful. The replies to this inquiry encouraged him to go ahead with plans for the first meeting of the Conference, which was held on April 25, 1952, at Texas Christian University. The program for this first meeting was planned by Dr. Albert J. Kingston, Jr., of Texas A. and M., Louie Harris of Oklahoma College for Women, and Dr. William Eller of the University of Oklahoma and Oscar S. Causey.

Representatives from five states attended the April meeting in 1952, which was devoted to the practical problems of operation that were encountered by the reading improvement programs in the region and were suggested by the theme: "Developing a Reading Program for College Students." Because there were quite a few persons in attendance who had not yet set up their local reading programs, but who were faced with this necessity, the Conference program evolved into a series of discussions in which the directors of the large college reading programs shared their experience-based "know-how" with the people who had yet to build their programs.

At the closing session, the Conference voted to provide for a continuing organization and elected Mr. Causey chairman of a committee authorized to publish the proceedings of the Conference and to arrange for a 1953 meeting. Additional members of the executive committee included Rudolph Fiehler, Head of the English Department, Southern (Arkansas) State College; Louie E. Harris, Department of Psychology, Oklahoma College for Women;

Albert J. Kingston, Jr., Director of the Reading Laboratory, Texas A. and M.; and William Eller, Director of the Reading Laboratory and Clinic, University of Oklahoma.

Purposes of the organization were to make known to other interested persons the procedures used in programs of college level and to encourage further experimentation and research. Membership was extended also to those associated with industrial and other adult reading improvement programs.

The second annual meeting was held December 12-13, 1952, at Texas Christian University, as the result of a decision to have the meetings during the first semester rather than in the spring. Theme of the Conference and of the 1952 yearbook was "Improving Reading Programs for College Students and Adults." Mr. Causey was again named chairman of the executive committee which included Miss Loris DeFigh, University of Tulsa; Tandy W. McElwee, Louisiana State University; A. J. Pellettieri, University of Houston; and Dr. Kingston.

"What Colleges Are Doing with Reading Programs" was the theme of the third annual conference December 11-12, 1953, at Texas Christian University. At the business session it was voted to change the executive committee to six members serving three-year terms, with provisions made in the election of the six persons in 1953 to allow the election of two committee members each year thereafter. It was also decided to elect two from the retiring committee and to limit membership on the executive committee to two persons from any one state.

The new executive committee includes Causey, who was subsequently named chairman, and Kingston from the retiring committee for three-year terms; Ralph C. Staiger, Mississippi Southern University, and Eller for two-year terms; and Mrs. Dorothy Cantrell, Arkansas State Teachers College, and Roy Sommerfeld, Oklahoma A. and M., for one-year terms.

Indicative of the variety of sponsors of reading programs and of the type of persons interested in the reading problem at the college level is the distribution by position and departments of the representatives at the conferences. The second meeting has been chosen to represent the three meetings:

Director of reading clinics or laboratories	8
Reading consultants or teachers	3
Deans	2
Heads of Departments of English	3
Director of Testing and Guidance	1
Director of Guidance	1
Counselor-Psychologist	1
Counselors in Guidance	2
President of College	1
Teachers (from instructors to professors)	
English	6
Education	10
Social Sciences, history	2
Psychology	2
Guidance	1
Staff members of Industrial Programs	4
Representing High Schools	13
Graduate Students	3
Optometrists	4

(Some others did not indicate positions or departments.)

The increase in the attendance and the number of institutions represented at successive Conferences reflects the growth of the Conference and the continued interest in the problems of reading at the adult level. At the first meeting an attendance of forty four (the forty-two names listed in the Proceedings do not include that of Dean Thomas F. Richardson, who appeared on the program) represented twenty-nine colleges in five states--Texas, Oklahoma, Arkansas, New Mexico, and Louisiana; six high schools in Oklahoma and Texas; and optometrists.

According to the second yearbook, attendance at the second meeting was seventy two and represented thirty-three colleges in seven states, Kansas and Mississippi being the two new ones; four industries which sponsor adult reading programs; five high schools in two states; and optometrists. This representation continued to expand in 1953 with Missouri and Indiana making a total of nine states of which forty-two colleges and universities were represented. Respresentation of the high schools, industrial programs, and optometrists remained about the same. Altogether, fifty-six different colleges and universities and sixteen high schools have been represented at the three meetings held by the Southwest Reading Conference.

One of the most obvious trends in the program of the Conference has been toward research. The first meetings were necessarily concerned with practical problems: how to use the tachistoscope, the use of reading accelerators, etc. Research was not excluded, however, and increased in importance in the successive programs. It appears that results of experimentation and research will continue to grow in importance in future meetings.